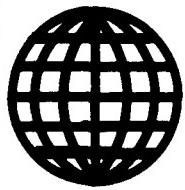


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JPRS Report

Proliferation Issues

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PROLIFERATION ISSUES

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22 March 1993

[This report contains foreign media information on issues related to worldwide proliferation and transfer activities in nuclear, chemical, and biological weapons, including delivery systems and the transfer of weapons-relevant technologies.]

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SOUTH AFRICA

Atomic Energy Corporation Official on Nuclear Program

MB0603124793 Johannesburg SATURDAY STAR
in English 6 Mar 93 p 11

[“Exclusive interview” with Dr. Waldo Stumpf, chief executive officer of the Atomic Energy Corporation, by science writer Anita Allen; place and date not given: “SA’s Nuclear Reaction”]

[Text] Q: There are persistent reports that South Africa was involved in a nuclear test on September 22, 1979 in the Indian Ocean. Was South Africa involved?

A: If it was a nuclear explosion, South Africa was definitely not involved. But up to now there has been no explanation of the incident. I doubt that it was nuclear because no radioactive fallout was detected.

Does South Africa have a secret weapons-grade uranium stockpile?

Certainly not. When a country accedes to the Nuclear Non-Proliferation Treaty (NPT), a negotiated safeguards agreement is a definite requirement. No room for “secret” or undeclared stocks of nuclear material is allowed. Within a mere eight weeks of our accession to the NPT on July 10, 1991 South Africa’s safeguards agreement was signed by us and the International Atomic Energy Agency (IAEA) on September 16. This is a world record in the history of NPT safeguards for a country with a nuclear programme. On October 30 we submitted the inventory of nuclear materials as required by the agreement.

Do you mean all nuclear material at that time, or all nuclear materials produced at AEC [Atomic Energy Corporation]?

In South Africa’s case it meant both. In terms of the NPT it is only required of a state party to the treaty to submit an inventory of nuclear material at a certain date. In our case it was September 30, 1991. The treaty does not provide for historical explanations prior to the specified date. However, in South Africa’s case the general conference of the IAEA imposed an additional requirement, namely that the completeness of South Africa’s inventory had to be verified. This meant that the production history of our enrichment plants had to be presented to the verification team. Normally, operating records are not kept for more than five years. Our records went back 15 years and we voluntarily submitted them.

Balancing the inventory with the operating records is no small task. You must remember that the AEC’s enrichment plants were not designed and operated to satisfy safeguards requirements. In those days, for instance, less attention was paid to the tail-end product—depleted

uranium. Over 15 years, imperfect tail analyses could have an influence on the balance exercise, and this was indeed the case.

At all times the production and use of nuclear material are controlled, but there are always small statistical inaccuracies which add up over time as material unaccounted for (MUF), and MUF limits have been set. In our material balance, if MUF is included then figures balance up. This was confirmed on September 21, 1992 at the General Conference of the IAEA—document GOV/2609, which you have.

(A copy of this IAEA document is in the possession of the Saturday Star. It contains a detailed analysis of inspections at 77 locations.)

The completeness of South Africa’s inventory was also confirmed to the General Assembly of the UN on September 21. I quote from the report of Dr Hans Blix, director-general of the IAEA, to that body: “The agency has carried out a large number of inspections of South African facilities, and locations outside declared facilities. It has carried out an extensive audit of historical operating and accounting records and performed a large number of analyses. With the co-operation of the South African authorities, IAEA inspectors have been able to visit all the sites they asked to see—declared or not declared, military or civilian—and they have found no evidence that the inventory is incomplete. Nor is the IAEA in possession of any other information suggesting the existence of any undeclared facilities or nuclear material. Naturally, if relevant information was obtained suggesting the need for access to additional facilities, locations or data, the agency would request such access.”

So what you are saying is that your inventory included the stockpile, and that its size is known to the IAEA inspectors?

Yes. Our inventory included every single gram of nuclear material. In fact, when we submitted our inventory in 1991, the unofficial comment was that it was the most comprehensive, professional yet.

Why then are there persistent reports, especially from US sources, of non-compliance with the terms of the treaty?

I really don’t know. Clearly from what I have outlined, and based on the official IAEA documents, one must realise that it is mischievous. To prove my point further: Dr Nick von Vielligh, AEC’s safeguards manager—one of the foremost specialists in the world—has been nominated to the Standing Advisory Group on Safeguards Implementation, which advises the IAEA on future safeguards. If the IAEA had been suspicious about South Africa, surely it would not have nominated him.

Furthermore, South Africa has publicly declared itself in support of Africa as a nuclear-weapons-free zone.

South Africa has also signed the non-proliferation of chemical and biological weapons treaties, and is in the

process of discussions with the Missile Technology Control Regime. To ensure that the necessary legislation is in place to implement these agreements, a new Act will come before Parliament this year on the non-proliferation of weapons of mass destruction.

All of this shows that South Africa is committed to the eradication of these very onerous weapons. We, and by that I mean the Government and the AEC, believe the world has the opportunity to address these problems and it should now do this. The world can be a better place if we eliminate these weapons.

This is why I view recent reports about South Africa's nuclear activities in a very serious light. It's too important. The rumour-mongering suggests we are ignoring the IAEA and all the other groups. I get angry when people try to make us out as an Iraq.

If people have any evidence, let them bring it to the notice of the IAEA and let it be investigated.

What exactly is the weapons-grade uranium stockpile?

First of all, there's no such thing as weapons-grade uranium in the IAEA glossary. We talk about natural uranium—as it occurs in nature containing 0.7 percent of the fissile uranium-235 isotope. Then there's low enriched uranium (LEU)—uranium enriched in the U-235 isotope above 0.7 percent but below 20 percent. Then there's high enriched uranium (HEU)—uranium enriched in the U-235 isotope above 20 percent.

When the US reneged on its nuclear fuels contract for the SAFARI-1 research reactor in 1977, we set up our own programme. When our pilot plant was decommissioned in 1990 we had enough HEU to supply SAFARI for a number of years.

Some reports suggest we don't know what to do with this HEU—we know exactly what to do with it. Our so-called stockpile has commercial value and it doesn't just sit there. It is included in the inventory, under safeguards, and subject to regular, ongoing inspections.

If we had not included it in the initial inventory, there was no way we could include it at a later stage. Apart from breaking the treaty, which is a serious matter, it would be stupid because the material has high commercial value and use. In any case we have a right to the material: we produced it, it is under safeguards and can be used for peaceful purposes.

You are on record as saying it would not be in anyone's interests to divulge the size of the stockpile. Why?

The organisation responsible for ensuring safeguards, the IAEA, has full knowledge of the material. The IAEA ensures that diversion for non-peaceful purposes does not take place. Furthermore, there is an understanding with the IAEA that information relating to HEU is kept confidential. This applies to all member states, and South Africa is no exception. A second important aspect is the physical protection of nuclear material. South

Africa is a signatory of the International Convention on the Physical Protection of Nuclear Material. Every endeavour should be made that measures prescribed by the convention can be met. These measures are indeed aimed at protecting nuclear material from theft, sabotage and so on. Making known the quantities and whereabouts of HEU would certainly not promote the objectives of the convention.

A recent report suggested that the US was considering purchasing this HEU...

The transfer of this material to the US has never been discussed. We have told the US and the UK that we could enter discussions on ensuring that the physical protection of the material is beyond doubt. In other words, we are prepared to talk about safeguards alongside ruling IAEA safeguards. We expect that these talks will take place soon.

Who is responsible for seeing that the NPT is adhered to in South Africa?

The AEC administers this and, as chief executive of the AEC, I will ensure it is responsibly implemented—that is my instruction from Government and I will ensure it happens. The AEC is the national body responsible for the control of nuclear material, including its import and export. The AEC also keeps all records in compliance with the terms of the IAEA's Safeguard Agreement.

Does South Africa have a nuclear weapons programme? [Footnote 1] [This question was subsequently put to Armscor [Armaments Corporation of South Africa]. Public relations executive Johan Adler answered: "Armscor does not have a nuclear weapons programme." Adler also said Armscor was not involved in any test in the Indian Ocean on September 22 1979, and that the incident remained a mystery.]

No. The NPT prohibits a state party to the treaty to have a nuclear weapons programme.

I cannot overemphasise the importance South Africa attaches to the NPT. If we were to break that, we would call into play the Iraq situation.

The viability of the AEC in the new South Africa has been questioned. Could you comment?

There has been an over-investment in the AEC. I am the first to endorse this. Our dependence on State funds is too high. Three years ago we redefined our total strategy, and rather than close down we redirected our efforts to commercially viable products. Three years down that road, we have reduced our dependence on the State by R[Rand]300 million—R451 million in 1992/93 as compared with R685 million in 1991/92. Of this, about R90 million goes to servicing loans.

We are fully committed to driving our dependence on the State lower. We had hoped that by the turn of the century we would be financially independent. Sales of

non-nuclear fuel products have shown a consistent 25 percent annual increase, even in depressed economic times.

It has been suggested that the AEC should simply be closed down...

One could close the AEC down, but then you must know that all that technology and expertise will be lost forever. Then in the next century, when the nuclear power programme will have to be extended, where will we be?

Are you saying that nuclear power is the way of the future?

Yes, but not immediately, because for the moment we have an oversupply of electricity. But our coal reserves suitable for power generation will run out around the middle of the next century. Then there is increasing concern over pollution.

What about nuclear waste—is that not an even more serious form of pollution?

If I asked you what was the most toxic substance, you would probably say something like plutonium, but cobra venom is far more toxic, and no one suggests we get rid of all cobras. Plutonium is not even very radioactive. The dangers of nuclear waste have been sensationalised—there are many more toxic substances, lead for example. Nuclear waste is an emotional issue mainly

because of the life of the unusable radioactive by-products. Although the life-span of some of the products is relatively long, it is indeed finite.

Nuclear waste is also only relevant once the nuclear fuel is reprocessed and the unusable substances are separated. The technology to vitrify nuclear waste and thereby inactivate it has been proved. The fear that it will pollute other substances is therefore not valid.

Furthermore, the management of nuclear waste has received so much research that safe storage under stable conditions has been proved. In addition, the international standards and safety regulations applicable to handling, transport and storage of waste are stringent and rigid. The risks of anything going wrong are so low that the hysteria surrounding the issue is not warranted.

In South Africa, low and intermediate level nuclear byproducts from the nuclear industry have been managed perfectly for close to 10 years. Our programme in this regard has been acclaimed by experts in the field worldwide.

South Africa will not embark on reprocessing spent fuel. It will be too costly. Encapsulated spent fuel in specially designed containers will be stored under licence and safeguards until such time as reprocessing becomes a viable option. This step is not foreseen until the middle of the next century.

Resolution of DPRK Issue Urged

SK1303054393 Seoul YONHAP in English 0534 GMT
13 Mar 93

[Text] Beijing, March 13 (YONHAP)—China said Saturday it hoped that the situation on the Korean peninsula would continue to progress in the direction of detente and stability.

A Foreign Ministry spokesman made the remark when asked to comment on North Korea's announcement Friday that it was withdrawing from the Nuclear Nonproliferation Treaty.

"China has constantly supported non-nuclearization of the Korean peninsula," he said.

The reason for Pyongyang's decision should be addressed in dialogue, he said.

"The position of China is that these issues should be properly settled through talks in a way contributory to the universal validity of the Nonproliferation Treaty."

JAPAN

Reportage on DPRK Decision To Withdraw From NPT

Miyazawa Urges DPRK To Reconsider

*OW1203044193 Tokyo KYODO in English 0420 GMT
12 Mar 93*

[Text] Tokyo, March 12 KYODO—Prime Minister Kiichi Miyazawa expressed dismay Friday at North Korea's decision to pull out of the Nuclear Non-Proliferation treaty [NPT] and called on Pyongyang to reconsider the decision.

Miyazawa reiterated the Japanese policy that normalization talks between the two countries would not make progress without settlement of the issue of international inspections of North Korean nuclear facilities.

North Korea, rejecting the inspections, announced Friday it is leaving the international treaty to protect its interests.

Foreign Minister Criticizes Decision

*OW1203061693 Tokyo KYODO in English 0538 GMT
12 Mar 93*

[Text] Tokyo, March 12 KYODO—Japan on Friday denounced North Korea's withdrawal from the Nuclear Nonproliferation Treaty [NPT] as a "challenge" to efforts to prevent the spread of nuclear weapons.

Foreign Minister Michio Watanabe said in a statement that Japan, in cooperation with South Korea and the United States, would strongly urge Pyongyang to reverse its decision to pull out of the treaty.

North Korea's decision to quit the nuclear safeguards agreement is a "challenge to the nuclear nonproliferation system, and creates a grave situation," Watanabe said in a two-paragraph statement.

Prime Minister Kiichi Miyazawa expressed regret at the North Korean action and called on Pyongyang to reconsider the decision to leave the treaty.

The state-run Korean Central News Agency (KCNA) said North Korea is "withdrawing unavoidably" from the treaty as a "self-defensive measure against the nuclear war maneuvers" of the International Atomic Energy Agency (IAEA).

"This principled stand...will remain unchanged until the U.S. stops its nuclear threats against North Korea, and the IAEA Secretariat returns to its principle of independence and impartiality," said the KCNA report monitored in Tokyo.

The report also called on the U.S. to immediately abandon the ongoing "Team Spirit" joint military exercises with South Korea.

North Korea has come under increasing pressure to allow IAEA inspections of two nuclear facilities at Yongbyon, north of Pyongyang, suspected of producing unreported plutonium.

Earlier this week, Japanese sources said North Korea appears to have extracted 16 to 24 kilograms of plutonium, enough to produce two to three nuclear weapons, government sources said.

North Korea insists its nuclear program is for peaceful purposes.

In late February, the IAEA suggested it would seek international sanctions against North Korea if it fails to comply with inspection requests within a month.

The KCNA said Friday that North Korea "will never be frightened in the least by" special inspections or other measures undertaken by the international community.

North Korea signed a nuclear safeguards agreement in January 1992.

Japan has said Pyongyang must satisfy demands for international inspections as a condition for establishing bilateral relations.

Talks on opening diplomatic ties have made little progress since they were initiated in January 1991.

No date has been set for a ninth round of normalization talks between the two countries.

Foreign Ministry Spokesman Masamichi Hanabusa told foreign correspondents the North Korean decision does not present an obstacle to a resumption of normalization talks.

"Our negotiations with north korea to normalize our relations is a separate issue," Hanabusa said.

But he said Pyongyang's withdrawal from the treaty further aggravates the "serious suspicion that North Korean may entertain an intention to produce nuclear weapons."

Queried about what Watanabe meant by warning of "grave repercussions," the spokesman said the reference was to the "very serious security implications" of the development for Japan and South Korea.

He said the impact of the announcement will also be global, "since it touches upon the very important question of securing nonproliferation of weapons of mass destruction in the post-Cold War period."

Asked about the possibility of a military strike against the Yongbyon facilities by U.S. or South Korean forces, Hanabusa said it is "premature to talk in terms of concrete steps."

He said any action concerning Pyongyang's withdrawal should not be made until North Korea responds to demands for it to retract the decision. "At this stage we have no concrete response."

Hanabusa said that due to Pyongyang's threatening military posture, the U.S. and South Korea have "good reason" to undertake their "Team Spirit" military exercise.

North Korea's First Vice Minister of Foreign Affairs, Kang Sok-chu, told reporters Friday that North Korea will not back down to international pressure but could retaliate.

"If those forces hostile to the DPRK (North Korea) attempt to frighten us in connection with the DPRK's withdrawal from the NPT, crying for pressure and sanctions against it, it is a foolish dream," Kang said, according to the KCNA.

"We will answer 'strong-arm action' with self-defensive measures, and 'military sanctions' with self-reliant defense capabilities," Kang was quoted as saying.

Embargo on Machinery, Chemical Exports

SK1303012993 Seoul YONHAP in English 0118 GMT 13 Mar 93

[Text] Tokyo, March 13 (YONHAP)—Japan's Ministry of International Trade and Industry, virtually imposing a trade embargo, will strictly regulate exports of machinery and chemicals to North Korea in response to Pyongyang's withdrawal from the nuclear Nonproliferation Treaty (NPT), the SANKEI SHIMBUN reported Saturday.

The newspaper cited a Ministry official as saying that Japan would maintain the virtual trade embargo until North Korea reversed its decision to pull out of the NPT.

"It's regrettable. We must meet with other related countries to press North Korea to repeal the decision," the unnamed official was quoted as saying.

A second official was quoted as saying, "the decision may pose a threat to the peaceful use of atomic energy. For instance, they may use some commercial products imported from Japan in the development of a nuclear weapon, so we need to regulate exports to North Korea more strictly."

The SANKEI said the Japanese Government would also control exports to countries friendly to North Korea, such as Syria and Libya, as goods shipped to those countries might find their way to North Korea.

Japan, the United States and five other advanced countries decided last December to ban exports of multi-purpose industrial products with conventional weapons applications to countries named by the coordinating committee for multilateral export controls (COCOM) such as North Korea, Iran, Iraq and Libya.

Tokyo Blocks Call To Consult on Plutonium Shipments

OW1003134493 Tokyo KYODO in English 1229 GMT 10 Mar 93

[Text] Manila, March 10 KYODO—Japanese lawmakers at an Asian-Pacific conference in Manila succeeded Wednesday [10 March] in blocking passage of a resolution urging Tokyo to inform other countries of sea routes used in its plutonium shipments.

The Guam-sponsored resolution urged Japan "to remain true to the spirit of regional cooperation in the area of environmental policy-making" by informing Asian-Pacific Parliamentarians Union Council (APPU) members of routes and methods of containing the nuclear material.

The resolution was supported by all members of the council's political committee except the Japanese delegation, which said it must first consult with the Japanese parliament, a conference source said.

Since the council operates on the principle of unanimity, the Japanese position effectively killed the resolution.

The APPU general assembly convenes in the South Pacific nation of Nauru in August.

The council meeting was attended by 110 lawmakers from 17 member countries.

NORTH KOREA

DPRK Envoy's Comments on IAEA Inspection Demand

SK0403110693 Moscow Radio Moscow in Korean 1000 GMT 3 Mar 93

[Report by station reporter (Cretov) on a news conference by DPRK Ambassador to Russia Son Song-pil at the DPRK Embassy in Moscow—date not given; from the "Focus on Asia" program]

[Text] In his speech at a news conference at the DPRK Embassy in Moscow, Son Song-pil, DPRK ambassador extraordinary and plenipotentiary to Russia, said:

[Begin Son Song-pil recording] The essence of the press statement recently issued by our Foreign Ministry spokesman is the expression of our position with regard to the Japanese authorities' commotion of nuclear pressure along with the United States against the DPRK.

As everyone knows, the International Atomic Energy Agency's [IAEA] special inspection of two of our military facilities has emerged as a keen issue, spurred by the United States.

Because the selected two places have military facilities, which cannot be targets of the IAEA's inspection, in other words, because the special inspection targets our military facilities, it should be a military and political

issue, not an issue of inspection by the IAEA. Discussions have already been made on this. Furthermore, the insistence on inspecting these facilities is based on forged information provided by the United States. It is possible for the United States, a hostile country to the DPRK, to be provided with materials which will be obtained from inspections of our military facilities. From this viewpoint, we have clearly expressed our position not to allow special inspection because it is a severe infringement of our country's right to independence.

We cannot but note that the Japanese authorities, however, along with the United States are actively insisting on special inspection of two DPRK military facilities and playing the role as a shock brigade to realize it. [end recording]

At a meeting held one week ago, the IAEA Board of Governors adopted a determination to force the DPRK to allow IAEA experts a one-month visit to two different facilities at the Yongbyon nuclear complex. According to the IAEA's materials, these facilities are radioactive waste storages.

In the news conference, Ambassador Son Song-pil said that this determination runs counter to the IAEA treaty because it was adopted based on information provided the United States, a third country. According to the ambassador, targets of inspection listed in the IAEA determination are ordinary military facilities, which are not supposed to be supervised by the IAEA.

Pyongyang is also concerned about the possibility that results of special inspection can be used for a third country's interest. At the same time, North Korea says that it will hold talks with the IAEA if the agency acts independently, not bending to the United States' pressure.

An IAEA team led by its representative Blix visited the two facilities in question twice in May 1992, and it did not find any sign of nuclear development. Besides, a recent IAEA general report said that the DPRK's nuclear plan does not threaten international security.

The primary aim of the nuclear pressure against the DPRK by Japan and the ROK is to mislead public opinion and divert public attention from their own nuclear development to something else, Ambassador Son said.

Citing the ROK magazine WOLGAN CHOSON, the ambassador said that the ROK authorities had developed nuclear weapons in secret since the seventies and that the then ruler deterred the realization of this plan.

The ambassador incisively objected to Tokyo's attempt to link the special inspection issue with the normalization of DPRK-Japan relations.

In conclusion, Ambassador Son said that his government will never allow special inspection of the country and that it would rather repeal the (?Nuclear Safeguards Accord) enabling nuclear inspections of the DPRK to be carried out under the supervision of the IAEA than allowing it.

Reportage on Withdrawal From Nonproliferation Treaty

Announcement on Withdrawal

SK1203033393 Pyongyang Korean Central Broadcasting Network in Korean 0133 GMT 12 Mar 93

[‘DPRK Government statement’ announcing withdrawal from the Nuclear Nonproliferation Treaty]

[Text] In our country today, a grave situation threatening the country's national sovereignty and security has been created. The United States and the South Korean authorities resumed the Team Spirit joint military exercise—a nuclear war exercise against our republic. At the same time, some circles and some member states of the Secretariat of the International Atomic Energy Agency [IAEA], which is under the directive of the United States, adopted a resolution imposing special inspections of our military facilities, which have nothing to do with nuclear activities, at the IAEA Board of Governor's meeting held on 25 February. This is an infringement on the sovereignty of our republic, interference in our internal affairs, and a hostile act aimed at strangling our socialism.

The DPRK Government sternly denounces the reckless nuclear war maneuvers of the United States and the South Korean authorities against the Korean people and resolutely rejects the unjust resolution of the IAEA Board of Governors meeting.

The DPRK Government, prompted by its antinuclear policy for peace, joined the Nuclear Nonproliferation Treaty [NPT] and faithfully implemented obligations pursuant to the treaty. Under the premise that the trustee states [kitakkuk] of the NPT would not deploy nuclear weapons on the Korean peninsula or pose a nuclear threat against us, we signed a safeguards accord with the IAEA and received its inspections.

However, the United States, a country possessing nuclear weapons, has continued to pose a nuclear threat against us, instead of carrying out its obligations to withdraw nuclear weapons from South Korea and to eliminate the danger of war against us. The United States still has nuclear weapons in South Korea and has continually been (?reinforcing) its nuclear arsenals with more up-to-date nuclear weapons and nuclear equipment. This proves that the promises of the so-called withdrawal of tactical nuclear weapons and declaration of nonexistence of nuclear weapons by the United States and the South Korean authorities were a trick designed to deceive our people and the people of the world.

An agreement was reached on nonaggression between the North and South, and our country is sincerely implementing its international duty in conformity with

EAST ASIA

the NPT and the safeguards accord. However, inspection of U.S. nuclear weapons and nuclear bases in South Korea is not being conducted. Thus our people's worry over the U.S. nuclear threat is not being resolutely dissolved.

The Team Spirit joint military exercise was suspended before the start of the IAEA's inspection of us. However, regardless of strong opposition from our people and the world's people, the United States resumed the Team Spirit joint military exercise while the nuclear inspection was in progress. Therefore, the nuclear threat was openly increased.

The Team Spirit joint military exercise runs totally counter to the ideology and purpose of the NPT, which respects the security of one's territory and sovereign rights and favors putting an end to the nuclear threat.

Because of the resumption of the Team Spirit joint military exercise, a nuclear war exercise aimed at us, the situation on the Korean peninsula is becoming an extreme situation the result of which cannot be foreseen. Thus, our country entered into a semi state of war.

Another grave situation that cannot be overlooked is the fact that the IAEA passed a resolution to enforce special inspection of our military facilities to turn our so-called nuclear issue into an international one and to inflict collective sanctions and pressure on us. Therefore, the IAEA is joining forces in the United States' antirepublic maneuver.

Based on the intelligence data fabricated by the United States—our opponent country—some strata in the IAEA's Board of Governors are attempting to enforce inspection on our important military facilities which have no relation to nuclear activities.

The inspection of these military facilities has no relation to the inspection which is in conformity with the safeguards accord. This is also not an issue the IAEA is authorized to deal with. To accept the IAEA's unjust inspection as it stands, would be to legalize the espionage act of the United States, our opponent country, and it would mean the beginning of the opening all of our military facilities for inspection.

Our special circumstance is that the country is divided and is always under nuclear threat from the United States. Therefore, opening up military facilities to the enemies is unimaginable. Today they will demand the opening of one military facility and tomorrow they will demand that another military facility be opened. This method is an old trick of the United States.

If we reject special inspection of military facilities, the United States will say we did not implement the special inspection, thus dragging our problem to the UN Security Council to try to carry out collective sanctions on us. This is the scenario of the United States, which was already drawn up.

If we are not able to obstruct this kind of plot by the United States and its followers, the whole nation will be

driven to confrontation and war, which will only result in entrusting this problem to the big powers.

Some strata of the IAEA's secretariat broke with the original position of observing the implementation of the Nuclear Nonproliferation Treaty based on fairness and neutrality. Therefore, they can by no means free themselves from the responsibility of taking part in the antirepublic maneuver of the United States.

Some strata of the IAEA's secretariat are ignoring our demand for inspection of U.S. nuclear weapons and nuclear bases in South Korea but are persistently working to carry out inspection of our military facilities, which the United States is enforcing. This is a clear act by our opponent country, the United States.

While keeping silent about the maneuver by Japan and South Korea to arm themselves with nuclear weapons, the IAEA is talking about our nonexistent development of nuclear weapons and is putting pressure on us. Therefore, we cannot refrain from animosity over the IAEA's double [word indistinct].

The reason our Republic's government joined the Nuclear Nonproliferation Treaty was to eliminate the U.S. nuclear threat against us. It was by no means to entrust our sovereign rights and security to be toyed with by someone.

Because of the indiscreet maneuvers by the United States and its follower forces and as we have been subject to the International Atomic Energy Agency's [IAEA] inspections, the nuclear threat to us has further increased and a situation in which peace and security on the Korean peninsula is not guaranteed but is destroyed, is prevailing.

These facts clearly show that the United States, the forces hostile to us, and some circles of the IAEA Secretariat are abusing the Nuclear Nonproliferation Treaty to threaten the sovereignty and security of our country, a non-nuclear country, and to obliterate our socialist system. Under such abnormal [pijongsangjok] situation created today, we have become unable to implement [toisang ihaenghalsu opke toeyotta] the duties pursuant to the NPT.

The DPRK Government declares that it is withdrawing [taltoe] from the NPT against its will [pudugi] as a step to defend the supreme interest of the country. Withdrawal from the NPT is our due self-defensive step countering the U.S. nuclear war maneuvers against our republic and the unwarranted act of some circles of the IAEA Secretariat. Our principled stance will not change until the United States suspends the nuclear threat against us and until the IAEA Secretariat returns to principles of independence and fairness.

The United States should immediately suspend the Team Spirit joint military exercise and renounce its

maneuvers to plot to harm and obliterate non-nuclear countries by manipulating the IAEA. Even if forces hostile to us, including the United States and some circles at the IAEA Secretariat, threaten us with special inspections or any other steps, we will never be intimidated. Such brigandish logic or coercive acts do not fool us. Any military threat, political or ideological offensive, or blockade cannot block the advance of our people. There is no change in the government policy of our republic to use nuclear energy for peaceful purposes, and our people will also continue in the future to make all possible efforts to realize denuclearization of the Korean peninsula.

We take this opportunity to express thanks to many member countries of the IAEA and its Board of Governors who treasure international justice, for their extension of support and sympathy to the just stand of our republic.

The purpose of our objection to and rejection of the unwarranted resolution forced by the United States at the IAEA Board of Governors meeting is to defend both the sovereignty of our country and the common interest of developing countries.

The DPRK Government and the Korean people firmly believe that the governments and people of all countries of the world who treasure peace and justice will pay deep attention to the grave situation prevalent on the Korean peninsula and will extend support and solidarity to our government's self-defensive measures.

[Dated] 12 March 1993

CPC on Withdrawal

*SK1203050493 Pyongyang KCNA in English
0445 GMT 12 Mar 93*

[Text] Pyongyang, March 12 (KCNA)—The 7th meeting of the 9th Central People's Committee [CPC] of the Democratic People's Republic of Korea was held at the Mansudae Assembly Hall on March 12, 1993.

It discussed the situation in which the DPRK is compelled to withdraw from the Nuclear Nonproliferation Treaty (NPT) because of the urgent state of affairs created in our country by the resumption of the "Team Spirit" joint military exercises of the United States and the South Korean side and the unjustifiable demand of the International Atomic Energy Agency (IAEA) for a "special inspection."

It was noted at the meeting that the DPRK had joined the NPT and effectuated the safeguards agreement for the purpose of getting the U.S. nuclear weapons withdrawn from South Korea, removing the nuclear threat of the United States to the DPRK and turning the Korean peninsula into a nuclear weapons-free zone.

Recalling that the United States, the depository state of the NPT and nuclear-weapon state, resumed the "Team Spirit" joint military exercises, a nuclear war game,

threatening the DPRK, a non-nuclear state, dishonouring its commitment to the treaty while raising a hue and cry over the unfounded "nuclear suspicion" against the north, and, timing to coincide with this, the United States and the countries following its lead and some officials of the IAEA secretariat adopted a "resolution" demanding a "special inspection" at the February board of governors meeting to have DPRK's military sites opened, sites which are unrelated to nuclear activities, while clamouring about the "nuclear weapons development", the meeting bitterly denounced this as actions to encroach upon the sovereignty of the DPRK, disarm it and destroy its socialist system.

The meeting noted in unison that such acts of the United States and some officials of the IAEA secretariat raise a very serious military and political problem which threatens the supreme interests of the DPRK.

It was particularly emphasized at the meeting that the DPRK had joined the NPT and effectuated the safeguards agreement not to get sanctions and pressure of the United States and its followers, exposed to nuclear threat.

It expressed the unshakable resolution of our people to heighten the revolutionary vigilance against the reckless moves of the United States and our hostile forces and firmly defend and glorify our-style socialism with the might of singlehearted unity.

In view of the prevailing specific situation in which the supreme interests of the country and the nation are threatened, the DPRK Central People's Committee decided the withdrawal of the DPRK from the NPT in the exercise of its sovereignty, proceeding from the urgent demand to firmly defend our socialist system.

News Conference Held

*SK1203091093 Pyongyang Korean Central
Broadcasting Network in Korean 0511 GMT 12 Mar 93*

[News conference with domestic and foreign reporters held on 12 March at the Taedonggang Diplomatic Corps Hall to clarify the DPRK Government's stand in connection with the decision to withdraw from the Nuclear Nonproliferation Treaty—recorded]

[Text] The DPRK Government held a news conference with domestic and foreign reporters on 12 March at the Taedonggang Diplomatic Corps Hall to clarify its stand in connection with the creation of a unique situation [tuksuhan satae] endangering the sovereignty of our nation and the country's supreme interests.

Respectfully placed at the fore of the conference site was a portrait of Comrade Kim Il-song, the great leader of our party and people. Reporters from publication and press organs in Pyongyang, including newspapers, news agencies, and broadcasting stations, foreign reporters, and related embassy functionaries representing various

countries attended the news conference. Choe U-chin, a roving ambassador at the Ministry of Foreign Affairs, spoke first.

[Begin Choe U-chin recording] How are you? We will now begin a news conference clarifying the DPRK Government's stand in connection with the creation of a unique situation endangering the sovereignty of the nation and the supreme interest of the country. First, Comrade Kang Sok-chu, first vice foreign minister, will briefly report on the result of the DPRK Central People's Committee's [CPC] (?meeting) and, following this, will announce the statement of the Republic's government. [end recording]

[Begin Kang Sok-chu recording] I once again extend my thanks to you for your participation in this conference. The Seventh Session of the Ninth DPRK CPC was held this morning to cope with the prevailing unique situation. The DPRK CPC session discussed the resumption of Team Spirit by the United States and the South Korean side and the special inspection unreasonably forced upon us by some circles of the International Atomic Energy Agency [IAEA].

In other words, the session discussed our country's position on the Nuclear Nonproliferation Treaty [NPT] in connection with the creation of a tense [kinbakhan] situation in our country. The session then adopted a relevant decision.

Based on this, the DPRK Government announced its position through a statement. [end recording]

Kang Sok-chu, first vice foreign minister, announced the DPRK Government statement and answered reporters' questions.

[Unidentified KCNA reporter] I will ask a question of you. I am a reporter from the KCNA. According to recent reports, the United States instigated some circles and some member states of the Secretariat of the International Atomic Energy Agency [IAEA] to adopt a so-called resolution imposing special inspections on us. Please give us a detailed account of the excuse they came up with.

[Begin Kang Sok-chu Recording] The United States instigated some circles and (?member states) of the Secretariat of the IAEA to adopt a resolution imposing special inspections on our military bases. The excuse for adopting this resolution is inappropriate in the light of international law. It is an unrealistic political resolution which is far from acceptable. There has never been a precedent in the world in which enemies imposed special inspections on us under the pretext of our not showing them our military facilities. This is a very rare phenomenon.

IAEA inspectors visited the sites in our country to verify and prove the contents of the report we made on nuclear materials pursuant to the safeguards accord of the international Nuclear Non- Proliferation Treaty. Six rounds of inspections have been conducted for this purpose.

Things went smoothly up until the fifth round of inspections. In other words, the contents of our report on nuclear material were proven true through confirmations by the IAEA inspectors who visited our country. This was a very great success, and the IAEA director-general himself appraised this highly.

Toward the end of the last year, however, the IAEA suddenly proposed under U.S. control that these irrelevant two military objects be inspected, in the wake of a sixth inspection. These two military objects are genuine military facilities that have no relation to our nuclear activities. Furthermore, it unreasonably proposed when it came to these military objects, it would dig even to the bottom of the buildings. This is unreasonable in view of law and is unrealistic.

When the IAEA proposed this, we asked it, "Why do you want to go there?" The IAEA then replied, "There must be nuclear materials under the floor." We asked it again, "How do you know that?" It said, "We know this through U.S. intelligence."

According to the IAEA's international regulations, it is not allowed to inspect a target based on intelligence materials provided by a third country. If it is allowed to inspect a target based on intelligence from an advanced country, the IAEA would fall under control of big countries. This is why all member countries of the IAEA opposed inspections based on information provided by a third country, thus the IAEA has no such regulation.

Can the IAEA's insistence on inspection, ignoring the IAEA's international law, be reasonable? This can never be an excuse for inspection. This is why we opposed inspection. Since we opposed it, the IAEA Board of Governors threatened us by deciding to carry out special inspections of our facilities at a meeting held in February.

From the outset, 35 countries have comprised the IAEA Board of Governors. Among them, 13 states, more than one-third, strongly opposed the decision on special inspections. The rest of the member states opposed it as well. Under U.S. control, however, the IAEA held a meeting of only (?original) member states of its Board of Governors in secret behind curtain, and reached the decision unreasonably. It was not agreed upon through a unanimous vote. There was no voting. This is itself unjust.

What does this all mean? The IAEA decided to carry out special inspections using our refusal to open these two buildings, military facilities, as an excuse. This decision is very unjust. Our insistence on refusing their opening can never be used as an excuse. This is a very clear matter of fact. [end recording]

[Reporter of Central Broadcasting Committee] I am a reporter from the Central Broadcasting Committee. The United States recently said that our major military bases are related to nuclear development. What is its objective in saying this?

[Begin Kang Sok-chu recording] Its objective is as clear as day. As I said a few minutes ago, there is no problem in inspection itself. The United States wants to spy on our military objects as well as inspect them. This is very unjustifiable and an act of plundering. In other words, it wants us to open up all our military objects. This is its ultimate aim.

Furthermore, it wants to inspect even underground military facilities. Meetings of the North-South Joint Nuclear Control Committee [JNCC] have been held. What is the basic obstacle to the JNCC? As you all well know, we insist on inspecting all the U.S. nuclear bases in South Korea while the South side insists on inspecting all of our military facilities, as instructed by the United States.

The demand for inspection of military objects is an issue concerning North-South relations which should be resolved in a Military Committee. Therefore, we strongly opposed it.

Since this issue—an issue related to mutual inspections in North-South relations—has not been resolved, the United States is now attempting to inspect them through the IAEA.

The United States slandered us by raving about our isolation, lockout, and so forth. It appears that the United States believes that if it puts pressure on us, just as it did on a certain nation, we will be forced to respond, thus making a miscalculation.

In other words, the United States wants to inspect and expose all of our military objects. Can you imagine we would allow it to do so? Do you think we can take off our pants?

Suppose we allow it to see one of our military objects today, it will want to see another one tomorrow, and finally all objects. This is the U.S. tactic.

Some people claim that we should clearly show the two objects at issue to solve the problem. Such remarks, however, were made without realizing the situation in our country and the internal essence [naechogin ponjil] of the United States.

In other words, the United States wants to inspect not only the two sites, but all sites one by one by using pressure and by unjustly using the IAEA's regulations. This is the U.S. essential purpose.

By enforcing the opening of military objects, the United States is trying to disarm our armed forces, which are the firm foundation of our system—the socialist system of our own style. [end recording]

[NODONG SINMUN reporter] I am a NODONG SINMUN reporter. Will you please explain the purpose of our participation as a member in the NPT since 1985, and the reason why we should withdraw from it today?

[Begin Kang Sok-chu Recording] We joined the NPT in December 1985. In a government statement in June

1986, we proposed the establishment of a nuclear-free, peace zone, and made active efforts to realize it.

The purpose for our joining the NPT was to make the NPT help force the withdrawal of the U.S. nuclear bases and nuclear weapons in South Korea to eliminate the nuclear threat against us. According to the NPT, a nuclear state is not allowed to make a nuclear threat against the other non-nuclear state. After joining the NPT, we failed to sign the Nuclear Safeguards Accord for six years. For this, the United States should be held totally responsible because it continued in providing a nuclear threat against us. The staging of such a large-scale war exercise as the Team Spirit joint military exercise—a nuclear war exercise held every year—is itself a nuclear threat against us.

Deployment of more than 1,000 nuclear weapons is itself a flagrant violation of the NPT. This being the case, we maintained that we would sign it only when nuclear threat against us is removed.

Finally last year, the United States declared that it withdrew its nuclear weapons from South Korea. Following this, it also declared that it would not conduct the Team Spirit joint military exercise, which had been held every year. This was indeed an epoch-making change.

We, therefore, formally signed the NPT under the conditions that all nuclear weapons had been withdrawn and that the Team Spirit exercise had been suspended. We allowed inspection and received inspections.

As we know, afterward pressure was constantly put on us in the course of conducting the inspection. This pressure was totally related to the political purpose of crushing our socialist system. In other words, this was a political course.

We thus began to doubt whether we should suffer from being constantly disciplined and from pressure, making ourselves confined in a house called the NPT. Rather than this, we decided to come out to the bright outdoors and take self-defensive steps while freely breathing fresh air.

Moreover, what became the issue was that organizations of the NPT were moving due to U.S. manipulation. Therefore, we believe that we need not endure pain by joining this organization. [end recording]

[Commentator of General Foreign Documents Publication House] Will you tell us about the future political prospects in connection with the important step taken for withdrawal from the treaty?

[Begin Kang recording] As was clearly pointed out in the statement, this step is a just self-defensive measure. Proceeding from the purpose of crushing our system and of enforcing the opening of our military facilities, the enemies will undoubtedly launch an offensive against us for withdrawal.

I believe that they may spread slanderous public opinion and take such international measures as collective pressure, economic blockade, and other steps by referring the issue of our withdrawal to the UN Security Council. We took all of this into account.

If such steps are actually taken, the situation will be very aggravated [maeu akhwadoeda] and grave consequences will clearly be brought about.

If the United States thinks that our country is the same as other world countries on which its pressure has been effective, this would be a great mistake.

We absolutely cannot assume the responsibility, even slightly, for making the situation complicated and grave. The responsibility will entirely rest on the United States, the ringleader, and some circles of the IAEA for bringing about such a situation.

We have the might of the single-hearted unity between the leader, the party and the popular masses, the foundation of a self-reliant economy, and a strong military power. Based on this, we are fully prepared to deal with any offensive and pressure by the enemy. We have nothing to be afraid of. [end recording]

[Choe U-chin recording] Now I would like to end today's news conference. Thank you. [end recording]

Press Conference Held

*SK1203051893 Pyongyang KCNA in English
0500 GMT 12 Mar 93*

[“Press Conference on DPRK’s Withdrawal From NPT [Nuclear Nonproliferation Treaty]”—KCNA headline]

[Text] Pyongyang, March 12 (KCNA)—A press conference for home and foreign reporters was held in Pyongyang this morning to clarify the stand of the Government of the Democratic People’s Republic of Korea toward the specific situation which endangers the sovereignty of our nation and the supreme interests of the country.

At the press conference first Vice-minister of Foreign Affairs Kang Sok-chu read a statement of the DPRK Government declaring its withdrawal from the NPT [Nuclear Nonproliferation Treaty] as a measure to defend the supreme interests of the country.

Then, he answered questions put by reporters.

He said the claim of some officials of the secretariat of the International Atomic Energy Agency (IAEA) following the United States and some member nations in fabricating the resolution on a “special inspection” was a sophism inconsistent with facts and an unfounded pretext which the aggressors customarily invent before taking an action.

He recalled that when the honesty of the DPRK’s nuclear policy had been proved, some officials of the IAEA

secretariat, at bidding of the U.S., abruptly raised the problems of “inconsistency” and “two sites”.

Noting that the “inconsistency” was caused by a mistake made by the IAEA in calculation, he said that failing to have the DPRK’s military bases opened with this problem, they, in a far-fetched way, alleged that two military sites were nuclear waste dumps.

“The U.S. allegation that our major military bases are related to nuclear activities is intended to have them opened and stifle the socialist system, the life and soul of our people, and disarm us,” Kang said.

“The inspection of our military facilities is a very serious political and military matter. So, if the inspection were allowed, it would mean that we voluntarily allow and legitimize the espionage activities of a hostile state for the purpose of a war,” he said, and added:

“This is a matter of principle related to the country’s sovereignty and security.”

Kang Sok-chu explained why the DPRK had acceded to the NPT and why it was withdrawing from the treaty.

He noted:

“We joined the NPT with a view to getting the nuclear weapons out of South Korea and removing the nuclear threat to us and we are now withdrawing from it because the npt has been abused to destroy our republic.

“Now that the United States, contrary to the treaty, is staging the ‘Team Spirit’ joint military exercises and, worse still, is trying to disarm us and stifle the socialist system by abusing the treaty, we have no other choice but to withdraw from it.

“The DPRK’s declaration of its withdrawal from the NPT is a justifiable self-defensive measure in face of the U.S. nuclear war moves against it and the unreasonable act of some officials of the IAEA secretariat.

“If the United States stop threat to the DPRK and some officials of the IAEA secretariat restore impartiality, all the problems would be solved smoothly.”

Kang Sok-chu stressed in conclusion:

“If those forces hostile to the DPRK attempt to frighten us in connection with the DPRK’s withdrawal from the NPT, crying for pressure and sanctions against it, it is a foolish dream.

“We will answer ‘strong-arm action’ with self-defensive measures, and ‘military sanctions’ with self-reliant defence capabilities.”

Intention To Develop Arsenal Denied

*OW1203121093 Tokyo KYODO in English 1157 GMT
12 Mar 93*

[Text] Beijing, March 12 KYODO—North Korea’s ambassador to China denied Friday that Pyongyang’s

decision to withdraw from the Nuclear Nonproliferation Treaty (NPT) signals an intention to develop an atomic arsenal.

In a news conference at the North Korean Embassy, Ambassador Chu Chang-chun said, "we maintain the position that the entire world should be completely free from nuclear weapons."

In response to allegations that Pyongyang has nuclear ambitions, Chu repeated his government's earlier contention that the withdrawal decision was taken to defend national interests and sovereignty.

"North Korea is compelled to withdraw from the NPT because of the urgent state of affairs created presently in our country," he said.

Chu sought to deflect such criticism by issuing the familiar charge that Japan is the region's true nuclear villain.

"All people know very well that Japan has a large quantity of plutonium, which is essential for the production of nuclear weapons," he said. "It is not a secret that Japan is producing nuclear weapons."

But Chu suggested that the npt decision would not affect ongoing bilateral talks between Tokyo and Pyongyang on the normalization of diplomatic ties.

"If the government of Japan apologizes for past aggression against the Korean people and approaches the talks sincerely, there is no reason why the talks should be affected," he said.

Chu warned that North Korea will espond in kind if any country retaliates against Pyongyang for its decision with moves such as imposition of economic sanctions.

"If measures are taken to pressure and impose sanctions against North Korea, we will take counter measures in accordance with the character of those steps," he said.

Asked to comment if communist neighbor and ally China had played a role in the decision, Chu reminded journalists that North Korea is a sovereign nation.

"The withdrawal of our country from the NPT was decided by our government and was not a question requiring consultation with the government of China," he said. "We have had no consultation with the Chinese Government on this matter, so I can not tell you anything about China's reaction.

China's Foreign Ministry released a statement through XINHUA NEWS AGENCY saying Beijing continues to support the denuclearization of the Korean peninsula.

China holds that current problems should be "settled properly through consultations in a manner conducive to the universality of the Nuclear Nonproliferation Treaty," the statement said.

Foreign Ministry on Withdrawal

SK1503053693 Pyongyang KCNA in English
0527 GMT 15 Mar 93

[“Foreign Ministry on DPRK’s Stand Toward Resolution on ‘Special Inspection’”—KCNA headline]

[Text] Pyongyang, March 15 (KCNA)—The DPRK Foreign Ministry in a memorandum published today on the truth of the nuclear inspections of the DPRK by the International Atomic Energy Agency clarified again the DPRK's stand regarding the agency's unjustifiable resolution on a "special inspection".

The memorandum says:

The DPRK Government sharply denounces and resolutely rejects the unjust "resolution" passed against the DPRK by some officials of the IAEA secretariat and certain member states as a wanton violation of the sovereignty of the DPRK and as a robber's act to disarm the DPRK.

We cannot look on unconcernedly when the United States and the South Korean authorities have resumed the once suspended "Team Spirit" joint military exercises and are pertinaciously pursuing their machinations against our country in collusion with some officials of the IAEA secretariat.

It is because of these acts that the DPRK has entered the semi-war state to safeguard its sovereignty and security and adopted the decision to withdraw from the NPT [Nuclear Nonproliferation Treaty] to defend its supreme interests. This is a self-defensive measure to defend our nation's dignity and its right to survival and a just measure to safeguard the common interests of the non-nuclear weapon states.

Neither "pressure" nor strong-arm acts whatsoever will ever go down with us.

The United States must drop its old way of thinking of the cold war era and immediately desist from its imprudent machinations of manipulating the IAEA to force us to open our military installations and strangle our socialist system.

Some officials of the secretariat and certain member states must apologize for the crimes they have committed against the Korean people and should forbear from conducting themselves under the pressure and directive of a particular country.

The memorandum gives a detailed account of the DPRK Government's sincere efforts for the implementation of the nuclear safeguards agreement, the unjust stand of some officials of the IAEA secretariat and of the back-stage manipulation of them by the United States.

EAST ASIA

JPRS-TND-93-008
22 March 1993

Plutonium Reportedly Extracted at Yongbyon

*OW1003131893 Tokyo KYODO in English 1257 GMT
10 Mar 93*

[Text] Tokyo, March 10 KYODO—North Korea appeared to have extracted 16 to 24 kilograms of plutonium that could be used in nuclear weapons from its nuclear facility in Yongbyon, Foreign Ministry sources said Wednesday [10 March].

The sources, citing ministry experts' calculations, said the amount of plutonium is enough to produce two to three nuclear weapons.

The calculations are based on the assumption a 5,000-kilowatt experimental nuclear reactor in the industrial complex of Yongbyon operated from 1986 to 1990 without any interruptions from mechanical malfunctions.

North Korea halted the reactor's operation in 1990 after producing [words indistinct] plutonium the sources said.

The ministry's findings were disclosed two weeks after the International Atomic Energy Agency (IAEA) on February 25 gave Pyongyang a one-month deadline to comply with its "special inspection" demand, a procedure under which it must accept checkups of its undeclared nuclear facilities.

IAEA Director General Hans Blix told a board of directors' meeting in mid-February his agency believes two Yongbyon sites declared off-limits to foreigners are nuclear waste processing and storage installations, following its analysis of reconnaissance satellite photos.

Earlier this month, the Stockholm International Peace Research Institute released a report saying Pyongyang will be able to accumulate enough plutonium to produce four to seven nuclear weapons by the end of 1995.

North Korea earlier said it extracted an "extremely small amount of plutonium" from nuclear fuel rods that had sustained a minor fracture.

SOUTH KOREA**Reportage on DPRK's Withdrawal From Nuclear Treaty****Government Responds**

*SK1203035593 Seoul KBS-1 Radio Network in Korean
0303 GMT 12 Mar 93*

[Text] In connection with North Korea's announcement of its withdrawal from the Nuclear Nonproliferation Treaty [NPT], the government said that North Korea will face severe sanctions from the international community in the future and that North Korea is totally responsible for this consequence.

A high-ranking government official said that North Korea has not yet officially informed the IAEA [International Atomic Energy Agency] of its decision to withdraw from the NPT but that as soon as North Korea withdraws from the NPT, the United Nations will have all the authority to deal with the North Korean nuclear issue. He said that the UN Security Council will be convened soon to discuss the North Korean nuclear issue. He then added that now that the international community has consensus that the North Korean nuclear suspicion should be clarified, the discussion at the United Nations will lead to such a resolution on limitless inspections as is applied to Iraq.

Seoul Ready To Deal With Any Threats

*SK1203125893 Seoul KBS-1 Television Network
in Korean 1210 GMT 12 Mar 93*

[“Government Statement” announced by O In-hwan, information minister and government spokesman, in the Office of Secretariat of North-South Dialogue on 12 March — recorded]

[Text] Government statement on North Korea's announcement of its withdrawal from the Nuclear Nonproliferation Treaty [NPT]:

On 12 March, North Korea announced that it will withdraw from the NPT. We regard this as a grave challenge to the worldwide nuclear nonproliferation system and as a serious act of eliminating trust in all agreements between the North and South, including the basic agreement, the joint denuclearization declaration and annex agreements which were already agreed upon by the North and South.

North Korea's decision to withdraw from the NPT with an excuse which cannot convince anyone arouses people's greater suspicions on its nuclear weapons development.

North Korea's abandonment of obligation as a non-nuclear state will be a serious threat not only to the stability on the Korean peninsula but also to peace and security of the world. North Korea will be held totally responsible for the aggravation of tensions between the North and South and for international sanctions.

Our government urges North Korea to immediately revoke its statement on withdrawal from the NPT and to allow nuclear inspections requested by the International Atomic Energy Agency [IAEA] in a resolution adopted at its Board of Governors meeting on 25 February. In addition, our government calls on North Korea to promptly respond to mutual inspections of the North and the South according to the joint declaration on denuclearization of the Korean peninsula.

Our government warns that it is fully prepared to immediately and resolutely deal with any provocative threat which North Korea may launch after the announcement of its withdrawal from NPT.

Withdrawal Releases DPRK From Obligations
*SK1203081893 Seoul YONHAP in English 0754 GMT
12 Mar 93*

[By Yi Tong-min]

[Text] Seoul, March 12 (YONHAP)—North Korea's nuclear problem returned to point zero Friday with its announcement that it was withdrawing from the Nuclear Non-proliferation Treaty (NPT).

Withdrawal from NPT automatically releases North Korea from the obligations of the safeguards accord with the International Atomic Energy Agency (IAEA), meaning no more inspections of nuclear sites.

Domestically, it gives more public credence to South Korean conservatives who oppose flexibility toward North Korea and who discourage any forward steps in inter-Korean relations by the new administration.

The announcement comes before the IAEA's March 25 deadline for North Korea to accept special inspection of suspected locations, and there could be no clearer message than this that Pyongyang will not open up its nuclear program to international scrutiny.

It shatters more than year-long efforts to bring North Korea to full nuclear watch that began with the withdrawal of U.S. nuclear weapons from South Korean soil and followed with the adoption of the inter-Korean declaration for a nuclear-free Korean peninsula, North Korea's much-awaited signing of a safeguards accord and six IAEA inspections in North Korea.

North Korea had threatened to leave the NPT ever since the IAEA started demanding a special inspection, but officials here brushed aside the possibility because they thought that North Korea would then be digging its own grave.

Pyongyang's decision is, indeed, nearly suicidal. North Korea is breaking no international law by leaving the NPT and the safeguards accord, but it gives the world community a free hand to take whatever punitive measures it sees fit.

The IAEA is now certain to take the matter to the U.N. Security Council, which will impose various sanctions and throw Pyongyang into further international isolation.

North Korea has, in short, voluntarily subjected itself to a global bashing since NPT withdrawal is an international issue.

Pyongyang risks losing the support of China, which was most sympathetic to its position in the past, because not even Beijing can go against the international consensus of preventing nuclear proliferation.

Why North Korea decided to take this chance, especially when global interest is in preventing proliferation of weapons of mass destruction, is unclear as yet.

A possibility being given wide credence is that it has already stockpiled a sufficient quantity of plutonium and other nuclear materials to produce weapons and is making a desperate attempt to hide the fact from the international community.

Suspicion against North Korea actually escalated after the IAEA began inspections of the Yongbyon nuclear complex in June last year.

The Vienna-based agency suspects Pyongyang may already have produced "kilograms" of plutonium and that it intentionally delayed signing a safeguards accord, due within 18 months of joining the NPT, for five years to pursue its nuclear weapons program.

It takes 7kg to 8kg of plutonium to make one atomic bomb. If the 5-megawatt nuclear reactor in Yongbyon has been in continuous operation for the past six years, North Korea could have at least 30 kilograms of plutonium in a secret store.

But North Korea keeps refusing the IAEA access to the two most suspicious sites, believed to contain waste from plutonium extraction. Inspection was critical to determining how much plutonium Pyongyang has.

But some officials say North Korea may be bluffing.

There are procedural hitches to Friday's announcement. North Korea has to notify all 153 other NPT members and the Security Council three months in advance of the date on which it intends to withdraw from the treaty.

Even if Friday's announcement is accepted as notification, North Korea's membership in the treaty remains valid for three months and gives it time to change its mind.

There is still a chance that this is just verbal grandstanding to show the world that North Korea will not succumb to pressure, these officials say.

But just a threat or not, Friday's announcement shows how much North Korea is willing to risk to keep its nuclear option intact.

TAIWAN

Nuclear Expert Group Attends Symposium in Beijing
*OW0403101893 Taipei CNA in English 0817 GMT
4 Mar 93*

[Text] Taipei, March 4 (CNA)—Nuclear experts from Taiwan and Mainland China are attending an unprecedented cross-straits nuclear technology symposium in Peking Thursday [4 March] and Friday.

A 43-member delegation, headed by Chiu Szu-tsung, director of the Department of Planning and Evaluation of the Atomic Energy Council, left Taipei for Peking Wednesday. Members of the group include officials in

charge of nuclear technology development, academicians and executives of the Taiwan Power Company.

Chiu said before departure that nuclear experts on both sides of the Taiwan Strait expected to start substantive cooperation on a basis of mutual trust and benefit. He also spoke of the possibility of inviting Mainland Chinese nuclear experts to visit Taipei.

Topics to be discussed at the two-day symposium will cover nuclear safety. Protection from radiation, operations of nuclear power plants, and nuclear waste disposal.

Chiu and other members of the group will visit the Qingshan Nuclear Power Plant in Zhejiang Province and the Dayawan [Daya Bay] in Guangdong Province after the symposium.

POLAND

Problems With Spent Fuel Rods Noted

93WP0103A Poznan WPROST in Polish No 6,
7 Feb 93 p 10

[Article by E.M.: "Uranium for Sale"]

[Text] In Swierk, 30 km from Warsaw, there is a nuclear research center in which there are two research reactors, an isotope production center, and a temporary storage place for a large quantity of nuclear fuel. Temporary because there is no place in Poland where it can be safely stored, and the export of dangerous cargoes to the states of the former USSR is no longer a possibility.

During 1965-67, a storage facility for "Ewa" nuclear reactor fuel was built and the possibility of also storing the fuel from "Maria" was considered at that time. The facility was called "Building 19a."

After the Atomic Law and its executive acts went into effect, it became impossible to collect spent fuel rods from "Maria" reactor in "Building 19a." Not until now has attention been called to the fact that moving heavy, multiton transport containers over a tank containing nuclear fuel is forbidden.

Nor is it possible to transload, on an emergency basis, fuel from "Ewa" should the tank, in which it is collected, spring a leak.

During a conference in Moscow in 1982, the Moscow side agreed to "investigate the request of IEA [International Energy Agency] as to the handling of nuclear fuel," but none of the contracts with the USSR for nuclear fuel contained a clause requiring the supplier to accept spent fuel rods.

Talks held in October 1989 in Leningrad were to conclude with a commitment on the part of the Soviet side that they would accept the fuel after 1992 if they receive a disposal on this matter from the USSR Ministry of Atomic Energy and Industry. An intermediary was even chosen: the firm "Tvely" from the USSR "Techsnabexport" foreign trade enterprise.

But negotiations with "Tvely" were a waste of time. The firm demanded that the Poles purchase very expensive transport containers and supply additional statements and documents. During this time the collapse of the USSR made it impossible to prepare or enter into a contract. In October 1991 IEA received a telex from Moscow informing them that the talks were broken off.

Poland is the only country using reactors fed with fuel purchased from the USSR that forgot about the previous regulation on this matter. "Attempts by IEA and the chairman of the National Atomic Agency (NAA) to export fuel to any country in Europe indicates that in every such case highly radioactive wastes formed in the

processing of spent fuel would have to be returned to Poland"—say the authors of one of the NAA reports, stamped "confidential."

[Box, p 10]

For Immediate Purchase

- Approximately 1,000 MR-6 fuel rods (and their MR-5 and MR-4 variations, enriched with uranium 235 in 80-percent and 36-percent amounts).
- Approximately 2,594 EK-10 fuel rods.
- Approximately 2,350 WWR-SM and WWR-M2 fuel rods.

All of the intermediaries in the European "atomic business" know today that the Polish IEA is looking for partners by which to conduct this transaction. In the programs for the development of the atomic energy industry in Poland the need to store highly radioactive materials containing fissionable products was never even anticipated. The cost of building a dry storage facility on the grounds of IEA in Swierk would amount to 100 billion zlotys, and its construction would take four years.

"If the fuel rods continue to be stored in water, there is a danger that they will leak as a result of corrosion"—warns the professional report prepared by Engineer J. Koziel, employed by IEA. The report was on the desk of the director of this firm many months ago and was also sent to the State Nuclear Supervision.

[Box, p 10]

Prof. Jerzy Niewodniczanski, chairman of the National Atomic Energy Agency:

"I admit that there are people in the Atomic Energy Institute who believe that all we have to do is make a serious search and we will find partners who will help us get rid of reactor fuel rods from Swierk. Meanwhile, the situation is completely different. The developed countries are no longer processing spent fuel and obtaining plutonium and rare elements in this way.

"We have been storing some fuel rods from reactors in Swierk in water tanks at the reactor, in accordance with world standards, for over 30 years. We really do not know what to do with them next. It is also true that the construction of facility 19a forces us to transport nuclear materials over those that are already stored.

"There is no danger that those accumulated in Swierk will explode. The fact that many of the loads are from more than 30 years back and that some of them are corroding—although this corrosion is not serious—is another matter.

"The most realistic option today is to build a dry storage facility. The cost of building such a facility today is approximately a thousand billion zlotys."

Reportage on Arrest of Dealers, Seizure of Uranium**Dealers Arrested**

AU1103134793 Warsaw ZYCIE WARSZAWY in Polish 8 Mar 93 p 1

[Piotr Adamowicz, Piotr Wysocki report: "Office for the Protection of the State Arrests Uranium Dealers"]

[Text] Three inhabitants of the Gdansk-Gdynia-Sopot urban area (they are all about 50 years old) attempted to sell radioactive materials for about \$125,000 dollars. They were arrested in an apartment bloc on Morska Street in Gdynia on Friday [5 March]. One of them is a former Security Service functionary. The Gdansk agency of the Office for the Protection of the State [UOP] learned about the sale of the radioactive material using operational methods, as we were told by circles close to the Ministry of Internal Affairs.

"A defectorscope weighing 6 kg encased in metal and bearing warning markings indicating that it contains dangerous radioactive material was confiscated along with some highly radioactive uranium oxide 238," is what Gdynia District Prosecutor Janusz Kaczmarek told ZYCIE.

The prosecutor declined to supply any other details. He only confirmed the fact that the three were being held in temporary detention.

The head of the Gdansk UOP agency, Major Adam Hodysz, also refused to discuss the details of the operation and only confirmed that it had taken place.

ZYCIE was able to find out that the level of radioactivity of the half a kg of uranium oxide 238 in powder form was several hundred times above the safe level. The three people arrested had kept it in a plastic bag. "If it had

gotten into the ground," our contact told ZYCIE, "it would have been practically impossible to eliminate the contamination."

The confiscated radioactive material has been taken to a Warsaw institute where, following detailed tests, it will be possible to ascertain its origins. An initial suspicion is that it was brought to Gdynia from one of the states of the former Soviet Union.

Uranium 238, Uranium Oxide Seized

LD0603213393 Warsaw TVP Television First Program Network in Polish 1830 GMT 6 Mar 93

[Text] Last night in the tricity area officers from the State Protection Office caught red-handed and arrested dealers in radioactive materials. Six kg of uranium 238 and half a kg of strongly radioactive uranium oxide were confiscated.

ROMANIA**Customs Officials Confiscate 2 Kg of Uranium**

AU0603164293 Chisinau BASAPRESS in English 1837 GMT 5 Mar 93

[Text] Chisinau, BASAPRESS 5/3/1993—The Romanian Special Services seized two kilograms of pure uranium from two Moldovan citizens and one Bulgarian at the customs post Giurgiu on the border of Romania with Bulgaria, mentions the Russian weekly MOLODIOJI MOLDOVA (Moldovan Youth). Moldova is turning into a transit area for all kinds of traffickers. The case of tracing citizens from Asian countries who are trying to reach the West through Romania is no longer a novelty and the attempts to smuggle across the border weapons and ammunition is a day to day fact, the weekly points out. The way the Leuseni customs point is organised between Romania and Moldova suggests lack of good organisation which allows the customs officers to be easily corrupted, concludes the weekly.

ARGENTINA

Reportage on Existence of Condor-2 Warhead

Defense Minister Denies Existence

PY0803145993 Buenos Aires TELAM in Spanish
1352 GMT 4 Mar 93

[Text] Buenos Aires, 4 Mar (TELAM)—Discussing the shelving of the Condor-2 project, Defense Minister Antonio Erman Gonzalez has clarified: "No one should be surprised by the nonexistence of a 'smart' warhead, because one never existed."

In response to a question on whether there was discontent in the Armed Forces over the lack of salary adjustments, the defense minister added: "Concerning the salary issue, I have never mentioned the possibility of any discontent."

Gonzalez made remarks to Radio Mitre from Italy. He was also asked whether he will meet with his replacement, Oscar Camilion. Gonzalez responded that he will possibly begin talks this afternoon and resume them tomorrow morning.

Concerning the dismantled Condor-2 missile materiel received by Spain, Gonzalez said the entire shipment "was duly controlled by Spanish experts" who were present at the time of loading.

The defense minister stressed that "a 'smart' warhead was never discussed because such a technology was never achieved" in Argentina. Therefore, he added: "We cannot be surprised now over the nonexistence of an 'smart' warhead that never existed."

When asked what was being sold he responded that he was unaware of "any missile or any missile components that had ever been sold" because that project "remained unfinished following President Carlos Menem's decision to discontinue research on a mass destruction weapon."

Gonzalez added: "We actually preserved all those components that might technologically or scientifically be used for peaceful purposes."

Concerning Spanish publications reporting that the materiel that arrived in Spain had been reshipped to the United States, Gonzalez noted that "I cannot confirm such reports." He added that it was actually clear that those components were shipped to study them and to determine "whether they can be used for scientific and peaceful purposes."

Asked about the government's refusal to increase military salaries and the situation that this refusal might create, the defense minister stressed: "Nothing strange will happen. Hopes will simply be delayed."

Gonzalez added: "Concerning the salaries issue, I have never mentioned the existence of discontent, especially at the level that we were accustomed to a few years ago."

Gonzalez was asked whether this decision by the executive branch favors the economy minister. He responded: "This is just speculation." Gonzalez explained that the issue of the Armed Forces salaries is not the only priority issue. He said: "The fact of resolving or not resolving it does not involve a victory or a defeat by the sides that failed to secure it."

Gonzalez said: "Whenever there is a problem, we must definitely get used to the idea that an integral solution is sought, a solution that will not have any negative consequences, such as an increase beyond the possibilities of the treasury, an increase that will again create deficits and inflationary risks that we definitely want to avert."

Gonzalez added: "I have always said it is absolutely fair to adjust salaries that are lagging behind, not only when compared with historical levels, but with current levels of other sectors in the administration."

Gonzalez said his stance does not contradict President Menem's decision, but "it represents a fair demand that may not be timely." He added that finding a solution to this problem will be the responsibility of the executive branch that "will take into account the reasons given by each side, but which cannot ignore the existence of salaries that are lagging behind."

Concerning the source of the funds for that salary increase, the minister responded: "The source from which those funds will finally be obtained has absolutely not been ruled out. To a certain extent, these funds have been included in the tax collection projection and spending reduction."

Gonzalez added: "Priorities are raised by social policies, the education situation, health, and so on." Nevertheless, Gonzalez said the demand is "fair because a large portion of these funds come from Defense Ministry enterprises that no longer cause a deficit and that already have been transferred to the private sector."

Gonzalez was asked whether, as an economist, he believes the economic program has any fiscal problems. He said: "I am not monitoring that, but I absolutely agree it is necessary to adjust public spending because the disastrous public accounts that we have received have not yet been overcome."

Air Force Chief Questioned

PY0803154793 Buenos Aires LA PRENSA in Spanish
6 Mar 93 p 4

[Text] U.S. Ambassador to Argentina Terence Todman last Monday held a meeting "behind closed doors" with Air Force Chief Jose Julia to ask him, with no intermediaries, about the "missing parts" of the Condor-2. During the meeting, the U.S. ambassador insisted that the missile's "intelligent warhead" [cabeza inteligente] was not sent to Spain—in fact, everything requested so far is already found in the United States. The U.S. ambassador again sounded out the true possibilities for

the "destruction" of the Falda del Carmen installations, where a sufficient infrastructure remains to reactivate the project.

However, Julia not only told Todman that he has nothing to do with the present or future of the Condor-2—exclusive responsibility of the National Space Activities Commission (Conae)—he also ruled out the possibility that the missile could have had at any moment a computerized guiding system since the beginning of his administration.

"The Condor-1, however, was complete, and President Carlos Menem himself activated it to test it. But the necessary funding to conclude the Condor-2 never arrived. I have always said that the Condor project was a great fraud," a high-ranking Air Force official told LA PRENSA.

In fact, it was not this new pressure from Washington that heated up the environment. When the "unofficial" U.S. request became known publicly, two different copies of the already famous "non-paper" [preceding two words in English] began circulating. The same source told LA PRENSA that two paragraphs of the text released by the Foreign Ministry were omitted. Those two paragraphs included "gratitude for everything done to dismantle the Condor missile to this date" with "the firm purpose" of "concealing the bad handling of diplomatic relations with the United States." The conflict between the Foreign and Defense Ministries focused on the fact that those who work with Di Tella feel that it is harmful to create a conflict with the United States, while those following Erman Gonzalez claim that a limit must be established to concessions so as not to tarnish the Air Force even more. It is appropriate to recall that the first Air Force annoyance took place in 1989 when then chief of staff, Brigadier Ernesto Crespo, avoided Ambassador Todaman's proposal to talk about the Condor missile because "it was an internal Argentine matter and there was no reason to talk about it with a foreign representative."

Furthermore, the Air Force chief of staff denied an article published yesterday by the morning newspaper CLARIN which stated that "the Air Force used to pay an extra bonus to its forces as compensation for the meager official salaries" for being the "generator of its own resources, such as the royalties it receives for exploiting Ezeiza Airport government deposits and the ramp and free shop services." He said that "such reports are incorrect because the military and civilian Air Force personnel receive only the regular salaries paid by all three Armed Forces branches, and that the revenues obtained by some Air Force organizations are administered based on current budget rules and under the appropriate controls."

Invitation Received To Join Missile Technology Regime

PY1203034093 Buenos Aires NOTICIAS ARGENTINAS in Spanish 2339 GMT 11 Mar 93

[Text] Buenos Aires, 11 Mar (NA)—The Foreign Ministry today officially reported that the Missile Technology Control Regime (MTCR) member countries have decided to formally invite Argentina to "join" that organization.

The Foreign Ministry noted that this decision "will become effective during the next MTCR meeting, and represents a clear recognition of Argentina's (?concrete steps) and contributions in the field of the nonproliferation of nuclear weapons of mass destruction, especially those linked to missile technology."

The next plenary meeting of the MTCR member countries will be held in Switzerland late this year. On that occasion, in addition to Argentina's formal entry, Hungary will also effectively join the organization.

On 9 March the U.S. Embassy in Argentina released a communique on the current government's policy on the nonproliferation of nuclear weapons and the destruction of missile technology.

In the communique the embassy mentioned, although indirectly, the dismantling by Argentine authorities of the Condor-2 missile, whose parts were sent to Spain and the United States a few days ago.

Despite reports indicating alleged discontent by U.S. military authorities over this issue, the embassy, through the communique, praised the Argentine decision to dismantle the project.

BRAZIL

Former Nuclear Project Official Interviewed

PY1203225793 Sao Paulo VEJA in Portuguese 10 Mar 93 pp 7, 8, 9

[Interview with Brigadier Hugo Piva, former director of the CTA, Aerospace Technical Center, by Joao Fabio Caminoto, at his office in Sao Jose dos Campos; date not given]

[Text] [Caminoto] During your professional time at the CTA [Aerospace Technical Center], did you ever feel that the Brazilian Government wanted to build a nuclear bomb?

[Piva] There were times when tension with Argentina was rather unpleasant, and we sort of blew the dust off the files that contained the technology for possible military use. I recall that before the time of General Galtieri [former de-facto Argentine president 1981-1982] there were rumors that Argentina had the bomb and a missile. We were concerned, but rumors immediately faded and we did not make any decision. We wished the tension had continued, because we would have received a higher allocation for our work.

[Caminoto] Did Brazil try to build the bomb?

[Piva] Brazil has always been very prudent and never wanted to produce a bomb. Our country badly needs energy and we are about to use up all our hydroelectric potential. This is why we invested in nuclear energy, which appeared to be the solution to the world's energy problem. Although many referred to our work as a parallel project—to which many people have attached military connotation—we filled a demand from the Brazilian scientific community.

[Caminoto] Was there ever a project to build the bomb?

[Piva] No. We carefully kept secret the technologies that could have military applications, for use in case of necessity. The same thing was said when we announced that we intended to build a satellite launch vehicle, the VLS. It was said that we did it for the sole purpose of developing a ballistic missile. That was not the case. We wanted to develop the technology to have, whenever we needed it, the capacity to build a missile.

[Caminoto] Would it have been easy then to produce a bomb?

[Piva] If things worked that way, elementary school children would never be taught mathematics, because math is essential for any military development. We cannot stop the development of a nation just because that development could be applied to military technology. I am sure that half the cases of murder in the Third World are perpetrated with kitchen knives. Yet this is no reason to forbid housewives to have knives in their kitchens.

[Caminoto] Could Brazil have managed to manufacture the bomb during the past decade?

[Piva] It could have, but there was no interest.

[Caminoto] Are the conditions currently right for that?

[Piva] If other countries can, why not us? But there is no need.

[Caminoto] You sponsored the VLS which should have transported the Brazilian satellite to space. Did you feel frustrated when an American rocket carried out the mission?

[Piva] I felt very satisfied because, in the end, our satellite was launched. However, I think we should have made a greater effort and launched it with our VLS which could have been ready long ago. We have all the necessary resources to launch our rocket and it would have been much cheaper than the American. It would have cost \$7 million, while we paid \$12.1 million.

[Caminoto] How long ago could the VLS have been ready?

[Piva] The Brazilian space program was admired by the whole world. No other country made as much progress with such few people and with so little money. We did not receive any essential aid from anyone for that

program. We developed everything—propellants, special materials, space technology, calculus methods—from scratch. The creation of the Sonda 4 began to bother everyone. It was boycotted by the whole world. They feared we would have military applications for it, which is just an excuse because Brazil does not have any militarist vocation to conquer anything. We did not declare war, we solved our border problems peacefully. Others have solved their problems by force and still have not changed. We, the underdeveloped, are the ones who should have the right to prohibit weapons because others use them unwisely.

[Caminoto] How did the boycott affect you?

[Piva] Each technological triumph caused concern. The first was when we managed to make solid propellant. In the beginning they exported the raw materials to us, almost free, because they could not believe we would get there. When they saw we had developed the propellant they began restricting the supply of raw materials to make the propellant. Then we managed to manufacture the raw materials. We then developed the technology needed to produce the special steels needed for the construction of great rockets; which few countries master. That caused great surprise.

[Caminoto] Do you consider the VLS development program has failed?

[Piva] I would not call it failure. I think the space program was betrayed by the Brazilian Government. Those who criticized it are responsible.

[Caminoto] You maintain that mastering advanced technology is the measure of the degree of sovereignty of a country. Has our sovereignty been threatened?

[Piva] I think so, yes. We have been weakened. Since the last administrations, since 1986, there has been a surrender that affects the future of our country. That could be changed, but it will take at least 20 years of hard work. Ours was a first world team, now we are behind.

[Caminoto] Is the Brazilian satellite outdated?

[Piva] I would not say that. It is simple. We launched a cheap satellite as a matter of prudence. With the PRC we are developing a more sophisticated satellite.

[Caminoto] Was the VLS just a pretence to build a ballistic missile?

[Piva] We are paid by the people to defend the country. There was a feasibility study. If ordered to do so, we could make a missile, but only under that situation. It was never started. We could have built one had it been ordered, it would not have been a problem.

[Caminoto] Hypothetically, if the Brazilian Government had the technology it could have used it for military purposes if necessary?

[Piva] Those are very strong words. We wanted to develop the technology because it would bring about national development. Brazil needs space. Our continental dimension, our inaccessible regions, our dependence on agriculture and on forestry make us highly dependent on space information. We need an earth observation satellite to control our borders. It is a national sovereignty issue.

[Caminoto] How could a Brazilian rocket help in this program?

[Piva] There are many scientific missions and applications that require very special small satellites flying in low orbits. Brazil could have fulfilled that requirement. The U.S. rocket that carried the Brazilian satellite will fill that market. It will capture the market we wanted.

[Caminoto] Do you know if Russian scientists were contracted to develop rocket propellants at the CTA?

[Piva] I heard something about that at the beginning of the Collor administration, but it was just that. I do not know any more details.

[Caminoto] What is the status of advanced research in Brazil?

[Piva] The Collor Government was very negative toward the scientific research area and toward advanced technologies. He ended research in our country, and that is an irreparable crime. A team of scientists can be disbanded in five or six months. Training a scientist takes at least seven years. We lost 20 years, because the country went backward. We have to begin again, regaining international credit. No one believes in Brazil any more.

[Caminoto] Should Brazilian industry return to the world weapons market?

[Piva] Yes, because Brazil has stopped in that area. We need the weapons industry because it is a sophisticated area that promotes other industries. Brazil today exports products that are manufactured as a result of the technology that the weapons industry brought to the country. We could have all of our industrial capacity involved in the weapons industry. In case of military mobilization, we would only have to reverse the flow, channeling production toward our own needs instead of selling our products abroad. To buy weapons is the worst possible deal because you transfer a lot of money abroad to create jobs and promote advanced technology somewhere else. In a military conflict, you can only buy the weapons that your supplier wants to sell you. To maintain that the country does not need the Armed forces is nonsense. Never in the history of mankind has any nation done without its Armed forces. A nation either has its own Armed Forces or remains under the rule of the Armed Forces of its neighbor.

[Caminoto] Did the Iraqi Government pay all it owed you?

[Piva] No. We had what amounted to a current account. We did many things for them, and at that time the balance was in our favor. Unfortunately, they could not pay because of the boycott.

[Caminoto] You have always maintained that your activities in Iraq were limited to developing a small air-to-air missile. Many people say that your work went far beyond that, including the modification of Scud missiles and contributing to nuclear development. Is that true?

[Piva] Iraq was a privileged partner of Brazil. The Brazilian Government strongly fostered those deals. I did not go there on my own account. I began the contacts when I was on active duty, with an official mission in 1979. I did not transfer any technology that I received from abroad; everything was developed in Brazil. I did not develop any sensitive technology for use in nuclear ballistic missiles. The air-to-air missile was something that they could buy as they wished. They had hundreds of missiles: U.S., French, Russian.

[Caminoto] Did Brazil export sensitive technology to Iraq?

[Piva] As far as I know, we only exported uranium ore, on which there is no restriction.

[Caminoto] And enriched uranium?

[Piva] I can assure you we did not.

[Caminoto] Should all technological projects be handled in a way that is totally clear to society?

[Piva] I don't think so. There are sensitive issues that cannot be made public to neighbors or commercial competitors. The same thing happens in the United States.

[Caminoto] What do you think of the proposed demilitarization of the Brazilian space program?

[Piva] The program is not militarized. It is being handled by military men because the CTA, which belongs to the Air Force, happens to be the most advanced center, but most of the technicians and engineers are civilians.

[Caminoto] You are known to have delivered secret lectures to high-ranking Libyan officers in the desert.

[Piva] Some 10 years ago I participated in secret lectures on the use of advanced technology in military undertakings, when Brazil and Libya had good relations. The Libyans gave almost unrestricted diplomatic support to Brazil. It was a friendly country. That was long before the beginning of international terrorism.

[Caminoto] Did we transfer technology to Libya?

[Piva] No. We only sold Engesa [Specialized Engineers, Inc.] vehicles.

[Caminoto] Are you being spied on?

[Piva] I don't feel I am being spied, because they know very well how to do things. I believe that after such a long time there is no reason to worry about me.

[Caminoto] Some of your colleagues say they were betrayed by your leaving the Air Force, because you began to make money from what you learned as an active officer. What do you think of that?

[Piva] I left the Air Force, but not of my own will. I devoted all my life to my work as an active duty officer. I was not promoted to a four-star general, and I was sent into retirement. Officers are picked for promotion to the rank of general. Minister Moreira Lima, who selected the officers, picked other people. I no longer help because

the Air Force does not invite me. Besides, all my commercial activities were endorsed by the Brazilian Government.

[Caminoto] In 1990, President Fernando Collor closed a hole in the Caximbo mountain range, in Para, which had been drilled for nuclear tests. Were you one of the coordinators of that secret program?

[Piva] I am in the military reserve, I still have military status, and the government has already expressed its official position on the subject clearly and with the participation of several scientists. I have nothing to add.

[Caminoto] A military man who has information about a nuclear bomb project should under no circumstances talk about the matter?

[Piva] Of course not.

INDIA

Japanese Linkage of Development Aid to NPT Viewed

93WP0102A Madras THE HINDU in English 4 Feb 93 p 8

[Article by C. Raja Mohan: "Nuclear Dialogue With Japan"]

[Text] There will be a strong temptation in New Delhi to see the upcoming nuclear dialogue with Japan as yet another point of pressure on India to sign the Nuclear Non-Proliferation Treaty (NPT). There may be good reasons for such a view.

In early 1992 the Japanese Government had formally announced that it could link its overseas development assistance (ODA) to such arms control conditionalities as being party to the NPT and lower military expenditure. The Japanese Government is also under pressure from the U.S. to demonstrate greater arms control activism, particularly in relation to non-proliferation. There is also a sense in Washington that Tokyo must be mobilised to achieve American non-proliferation goals in the Indian subcontinent given the declining U.S. leverage on aid and the emergence of Japan as the largest donor to South Asia.

The Japanese prime minister, Mr. Kiichi Miyazawa did elevate nuclear non-proliferation to the top of the agenda during his talks with the visiting Prime Minister, Mr. P. V. Narasimha Rao, in June 1992 and the Pakistani Premier, Mr. Nawaz Sharif, in December 1992. India, however, rejected the Japanese entreaties for signing the NPT. The Indian Prime Minister reiterated the Indian position on the discriminatory nature of the NPT, the importance of revising the treaty when it comes up for review in 1995 and the urgency of working towards global nuclear disarmament.

Since New Delhi had already agreed for a bilateral discussion of the nuclear issue with the U.S., Mr. Narasimha Rao proposed a similar dialogue with Japan, which was accepted by Mr. Miyazawa. Mr. Nawaz Sharif argued that Pakistan would not sign the NPT unless India did. With the Sharif visit to Tokyo taking place in the light of revelations about Pakistan's ability to deploy seven nuclear weapons on short order, the Japanese Government postponed the signing of fresh loan agreements with Pakistan while agreeing to release emergency aid for flood relief in Pakistan. Pakistan had also agreed to a bilateral nuclear dialogue with Japan. It is in this context that the visit of Mr. Mitsuro Donowaki, Tokyo's Ambassador for Arms Control and Disarmament, to New Delhi and Islamabad this month has been scheduled.

Despite the sense that Tokyo is about to increase the pressure on India to sign the NPT, there is the need to see the Japanese nuclear policy in all its complexity. As the Asian strategic and nuclear environment begins to

change, there are emerging nuances in the Japanese nuclear posture that must be appreciated in New Delhi. Contrary to the popular perception, there are more factors that bring Japan and India together on the nuclear issue than those that divide them.

As the initial term of the Nuclear Non-Proliferation Treaty comes to an end in 1995, there is some common ground emerging between New Delhi and Tokyo. The Indian Prime Minister's call for a modification of the Treaty in 1995, although technically impossible, may have opened the door for Japan to articulate its own concerns about the NPT. The Japanese have not forgotten that the origin of NPT had more to do with denuclearising Germany and Japan than with keeping nuclear weapons out of the hands of the developing countries. It is no wonder that the Japanese took years in ratifying the NPT.

As the NPT comes up for review in 1995, Tokyo has some important security concerns. The Japanese are not entirely happy with the declared American policy of seeking an "indefinite" extension of the NPT. The political result of making the NPT a perpetual treaty would be the permanent freezing of the nuclear asymmetry between China and Japan. This certainly is not in the long term interest of Japan.

Influential circles in Japan are beginning to argue for an interim position that would call for a limited extension of NPT, say by five years at a time. Such a position would give some breather for Japan in future if it desires a reversal of its current non-nuclear policy. Besides it has the advantage of retaining some leverage for Tokyo in shaping the international bargaining on NPT.

With the collapse of the Soviet Union and the continuing decline of Russia as a great power, Japan and India as well as the rest of Asia are now confronted with the challenge of Chinese nuclear monopoly in the region. Until now, much of Asia could ignore the threat of Chinese nuclear weapons, thanks to the overarching nuclear balance between Moscow and Washington. With Russia struggling to hold its body and soul together and the U.S. under pressure to look inward, Asia can no longer escape the strategic consequences of Chinese nuclear dominance in Asia.

As New Delhi and Tokyo know, the transfer of nuclear weapon technologists from Russia to China is absolutely legal under the NPT which has one set of rules for the nuclear weapons States and another for the non-nuclear ones. For India and Japan the debate about NPT is no longer about abstract principles; it is about geopolitics and the balance of power in Asia.

The reordering of international relations in post-Soviet Asia has begun to pose an acute nuclear challenge to Japan. The central pillar of Japanese national security for four decades has been the alliance with the U.S. and the American nuclear umbrella that came with it. The U.S. nuclear guarantee to Japan may have been credible against the Soviet threat. But it is hardly credible against

China, given the continuing American "romance" with China, the growing tensions in the U.S.-Japan relations, and the American reluctance to take sides between Japan and China.

Japan has the material and technology to emerge as a missile and nuclear power at very short notice. But given the burden of history and its own commitments under the NPT, Japan may not embark on such a course, unless it is gravely provoked.

In welcoming the recent strategic arms reduction treaty between Moscow and Washington, India had called for time-bound global abolition of nuclear weapons, renunciation of the doctrine of nuclear deterrence and the importance of bringing in other nuclear weapon States like China into the arms control net, objectives which have found increasing resonance with the Japanese public opinion.

There are other nuclear issues on which India and Japan may find themselves together. Like the Indians, the Japanese are increasingly frustrated with the international efforts to constrain their peaceful nuclear programme, in particular, their plans to use plutonium to generate electric power from the fast breeder reactors. For the Japanese, the plutonium route is integral to the achievement of energy independence. They no longer hide their irritation at the Western attempts, in the name of non-proliferation, to strangle the peaceful nuclear programmes of even those countries that have given up their nuclear weapon option by signing the NPT.

The Japanese also resent the present safeguards regime of the International Atomic Energy Agency that spends so much of its resources on inspecting their peaceful nuclear programme. Like India, Japan too is concerned about the proliferation of nuclear weapons and material from the former Soviet republics. Like New Delhi, Tokyo is keen to devise an IAEA [International Atomic Energy Agency] safeguards regime that targets the nuclear programmes in the nuclear weapon States which now remain beyond the pale of international control. For some time now, Tokyo has been pressing Moscow to accept IAEA safeguards on nuclear material released from dismantled warheads.

Although they have not gone public in a big way, there is a fundamental rethinking on the nuclear question, in all its dimensions, in Japan. This clearly is part of a larger review, that may have begun to push Japan towards a more independent foreign policy emphasising a new political activism in Asia. This rethinking offers an unprecedented opportunity for New Delhi and Tokyo to consider avenues for greater strategic cooperation. The Indo-Japanese dialogue could help generate a quiet, but new nuclear empathy between New Delhi and Tokyo.

Minister Says Space Agency Work on Schedule

93WP0100A Madras *THE HINDU* in English 2 Feb 93
p 6

[Text] Madras, Feb. 1—The threat of a "permanent U.S. ban" on ISRO [Indian Space Research Organization] as a fallout of the cryogenic engines deal with Russia will not affect the country's space programme, the Union Minister of State for Science and Technology, Mr. Rangarajan Kumaramangalam said here today.

"We are working on the basis that even if the existing two-year ban is made permanent, it will not affect us," he told presspersons. The issue had nothing to do with science but was "commercial."

He was reacting to the report of an American official's statement on the likelihood of permanent sanctions on the Indian Space Research Organisation, after the Russian President, Mr. Yeltsin stood by the cryogenic engine technology deal during his visit to India.

He said the supply of cryogenic engine technology would put India firmly on the global map as an efficient supplier of space technology. The success of the Insat-2A satellite, as well as the prospects of a perfected Indian launch vehicle, threatened to upset the commercial scene for space technology suppliers.

The U.S. did not want India to be a "seller of space technology" having already suffered because of the emergence of the French, the Minister said. Moreover, there was a possibility that India would be the most effective cost-wise.

At present, there was a U.S. ban on ISRO till 1994. Even if the Russians were to pull out of the engines deal, there would be a delay of only three years in the space programme, shifting 1995 test dates to 1998.

The Government had committed Rs [Rupees] 500 crores to developing space technology products which were earlier imported from the U.S. The European Market was also being tapped. India possessed an excellent rocket launching facility, close to the equator.

Not Weapons-Oriented

He said it was common knowledge that cryogenic rocket engines technology did not have application in missile control systems. India was also not interested in using the rocket technology for "multiple-entry warhead weapons," which could be employed for high tech warfare. "We do not have enemies that far." On amendments to the Dunkel draft on intellectual property rights, he said India had its own stand on the issue, and had formulated its amendments. The question was yet to be discussed in the Rajya Sabha, and the Indian stand would be spelt out after hearing the members also.

There had been a good response to the Electronics Hardware Technology Parks (EHTP) scheme, with about

700 applications waiting to be taken up once the issue of Customs clearance was settled, Mr. Kumaramangalam said.

The proposal was waiting to take off, as the companies which were keen on setting up electronics units under the scheme wanted a separate body for issue of certificates for Customs clearance.

As the "attrition time" for the electronics industry was too quick, companies in the field had asked for a certification machinery for imports, which would work at a faster pace, unlike the case of other industries, Mr. Kumaramangalam said.

"The industries waiting to set up their units are going ahead as if they have got the clearance, and I have advised them to proceed," he said. Many of the companies interested in starting units at the EHTPs were "big players."

Satellite Launch Vehicle Mock-up Trials Complete

93WP0101A Madras THE HINDU in English 4 Feb 93 p 4

[Text] Bangalore, Feb. 3—India's first indigenous Polar Satellite Launch Vehicle PSLV-D1 scheduled for launch during the end of this year has completed full scale mock-up vehicle integration trials at the launch pad at Sriharikota.

Sources at the Indian Space Research Organisation [ISRO] said the Space Commission Chairman, Prof. U. R. Rao, and a team of scientists closely scrutinised the PSLV-D1 mission events and criticalities recently.

Liquid propellant filling operation trials and gas charging trials were conducted for the second and fourth stages. Fluid filling operations were carried out using the checkpost computers.

The fourth stage of the PSLV-D1, the terminal stage which injects the IRS [expansion not given] Satellite into sun synchronous circular polar orbit, has been tested.

During the launch, the fourth stage is ignited at an altitude of 770 km at 640 seconds after lift off and the stage has to provide an inertial velocity of 7.44 km per second to the spacecraft. The critical fourth stage has been developed by the Liquid Propulsion System Centre (LPSC) and Vikram Sarabhai Space Centre.—PTI

IRAN

Foreign Ministry Urged To Protest Accusations on N-Arms

LD1003184593 Tehran IRNA in English 1604 GMT 10 Mar 93

[Text] Tehran, March 10 IRNA—The English daily TEHRAN TIMES here Wednesday called on the Foreign

Ministry to make "official protest" to those third world countries which are still accusing Iran of trying to get access to atomic weapons.

The daily, in its editorial, also urged the ministry to prevent a situation where others use Iran as a means to resolve their own problems and difficulties.

It referred to last Monday's report of British television which claimed that Iran was still trying hard to get access to atomic weapons and that last year the country was to purchase needed materials for the manufacture of atomic weapons from Kazakhstan and was to enjoy the technological support of the republic.

"Apparently, the issues related to Iran's arms have become the major tools of international propaganda launched by powerful countries selling western arms. At any rate, in order to get rid of the world's stagnant arms market, the arms sellers require a pretext, and today Iran is the best choice for them."

Pointing to some third world countries including Kazakhstan, the paper said a number of these countries, which have lost their credit and geographical status after collapse of world's bipolar system, endeavored to have a superficial proximity to Iran and expressed willingness to sell some goods and technology to the country after the West expressed intense concern on Iran's power and presented it as a form of "allergy."

"By mentioning the first piece of news to the effect that they were on the threshold of an important deal with Iran, they endeavor to resolve their problems with the West by making a pawn of an unreal and imaginary deal with Iran."

IRAQ

UN Team Discovers Undeclared 'Dual-Use' Machines

NC1103115793 Paris AFP in English 1133 GMT 11 Mar 93

[Excerpts] Baghdad, March 11 (AFP) - Iraq has promised to provide a list of its nuclear suppliers within the next two weeks, the head of a UN weapons inspection team said here Thursday.

Dimitrios Perrikos has also said however his team found dual-use machines that Iraq should have declared because they could be used for nuclear weapons. [passage omitted]

The inspection chief said he held a final meeting on Thursday during which the Iraqis agreed to complete the list of suppliers, 90 percent of which they claim to have already surrendered.

Despite good Iraqi cooperation, the week-long mission discovered "dual-use machine tools that could be employed for nuclear weapons or civilian purposes," he said.

"The tools should have been declared to the UN inspection team but had not," said Perrikos. "None of the machine tools were being used for banned activities when inspected."

The United Nations ordered the elimination of all Iraq's weapons of mass destruction after the 1991 war for Kuwait.

"I cannot say we saw anything that is prohibited at the sites we visited," Perrikos said. Of the 28 sites inspected, three of them were new, he said, adding they had been photographed for analysis.

As part of a rotation, a 19-member group of UN chemical, biological and ballistic arms experts is due here Thursday to continue inspection of the country's military arsenals.

David Franz, its American leader, has said the new mission would cover a variety of areas. "We will be visiting sites we have seen before or new sites. We are free to visit any site or installation in Iraq," he said.

A chemical and biological weapons expert in the U.S. Army, Franz declined to say how long the inspectors would stay on the 53rd disarmament mission.

Nuclear Program Could Restart Unless Suppliers Named

*NC0703152593 Paris AFP in English 1450 GMT
7 Mar 93*

[Excerpt] Baghdad, March 7 (AFP) - Iraq has the expertise to restart its dismantled nuclear programme unless the United Nations secures a list of its foreign suppliers, a UN arms inspection chief warned here Sunday.

"The brains are there. They have good engineers and they have the machine tools to be able to start things again," said Dhimitrios Perrikos, head of a nuclear team which arrived Wednesday.

"This is why we're trying to find enough information so that we can base our long-term monitoring, because without it anything may happen," the Greek inspection chief told reporters.

"The people who have supplied the information and sensitive equipment... are still in place. You can bet there will be some who are going to sell their things," he said. "And definitely, there will be people here who will be tempted to buy."

Perrikos acknowledged Iraqi officials had given assurances Baghdad would not attempt to relaunch its nuclear programme, but he said the only guarantee was the disclosure of the full list of suppliers and long-term UN monitoring. [passage omitted]

Regime Reportedly Killed 2 Nuclear Scientists

NC1103163293 Voice of Iraqi Islamic Revolution in Arabic 1430 GMT 11 Mar 93

[Text] Our sources inside Iraq report that tyrant Saddam regime's henchmen killed nuclear scientist Dr. Talal in his home in al-A'zamiyah on the night of 6 February. Another nuclear scientist, Dr. 'Amil, was also killed in his home by gunmen on the night of 20 February. The sources said the two murdered men were nuclear scientists working at al-Za'faraniyah nuclear plant.

These murders were part of an effort to liquidate Iraqi atomic scientists by Saddam's regime. Saddam's intelligence agency also killed Engineer al-Jalabi in Jordan more than two months ago.

RUSSIA**Foreign Ministry Assails DPRK's Withdrawal From NPT**

*OW1203200993 Moscow INTERFAX in English
1924 GMT 12 Mar 93*

[Following item transmitted via KYODO]

[Text] The Russian Foreign Ministry received "with great concern the statement made by the government of the Democratic People's Republic of Korea about leaving the Nuclear Non-Proliferation Treaty". This is the essence of a statement made public in Moscow on Friday [12 March].

The statement notes that Russia "as a depositary of the Treaty, a key document designed to preserve international peace and security in the nuclear age, cannot remain indifferent in the face of any step which undermines the international non-proliferation status, whoever takes that step."

Moscow "would expect that Pyongyang will responsibly think of the consequences of its action and the DPRK government decision will be reversed," the document emphasizes. The ministry expressed its conviction that "strict observance of the Nuclear Non-Proliferation Treaty would serve the best interests of the North Korean state and stability and security in the Korean Peninsula."

In the new situation, the Russian Foreign Ministry reports, Russia will immediately contact other depositaries of the Treaty.

A few days ago the International Atomic Energy Agency wanted North Korea to let an international team of experts visit its nuclear facilities. This provoked a strong response of the DPRK authorities, which declared that they would not allow interference into the country's internal affairs. Later a statement that North Korea is leaving the Nuclear Non-Proliferation Treaty framework was made public in Pyongyang.

PRC To Purchase SAMs

*PM0503104793 Moscow IZVESTIYA in Russian
5 Mar 93 First Edition p 3*

[Vladimir Skosyrev report: "Secrecy Spurs on Arms Race in Formosa Strait"]

[Text] Beijing—China has decided to buy S-300 surface-to-air missiles from Russia. In all, more than 100 of them are to be supplied to China, Hong Kong newspapers maintain, citing Western diplomatic sources.

The deliveries will be made quickly, since China has already begun equipping sites for launchers of the anti-aircraft missiles, which are called the Russian analogue of the U.S. Patriot.

As previously, military-technical cooperation between Russia and China is shrouded in a dense veil of secrecy. Russian and Chinese officials do not confirm the Hong Kong press reports, but neither do they deny them. It is only known for sure that representatives of the two countries have discussed the possibility of selling our S-300's to China.

If an accord really has been reached, this means that Russia has succeeded in making a big new breakthrough into the Chinese arms market. The first such breakthrough in recent years was the sale of 26 Su-27 fighters.

On the other hand, the conclusion of the deal will certainly displease Washington. Anonymous Pentagon officials say in conversation with journalists that the sale of our antiaircraft missiles runs counter to the agreement on control over missile technology, which Russia promised to comply with. Moscow rejects the accusation, declaring that the S-300 is a purely defensive weapon, and its range does not exceed 300 km—the limit set by the agreement on control over missile technology.

In any case, neither Russia nor China gain anything by steadfastly observing military secrecy. First, when the handover of such arms takes place, it is monitored by Western intelligence services whatever happens. Second, by exaggerating the scale of Russian-Chinese military ties, the military-industrial complexes in the United States and West Europe are enabled to more easily "push" through government and legislative organs their own proposals to sell military hardware to the East Asian region.

This was the case when the possibility of selling U.S. F-16 combat aircraft to Taiwan was being discussed. The secret Russian-Chinese talks on the Su-27's became an argument proving the need to compensate for Taiwan's "lagging behind" in the sphere of military aviation. As a result, Washington and Taipei reached an accord on a deal which exceeds many times over the volume of the Russian-Chinese one.

The rivalry between Russia and the United States on the world arms market is a well-known fact. But we cannot help but be alarmed at the fact that the two powers are supplying arms to armies opposing each other in the Formosa Strait. Has the time not come for U.S. and Russian diplomats to think about how their countries can avoid competition at least in those regions which have the potential to become hotbeds of military conflicts?

Deputy Foreign Minister on START II, Nonproliferation

*PM0403143693 Madrid ABC in Spanish 2 Mar 93
pp 38-39*

[Interview with Russian Deputy Foreign Minister Grigory Berdennikov by Isabel San Sebastian in Madrid; date not given]

[Excerpt] Madrid—[passage omitted] [San Sebastian] Has the threat of a nuclear holocaust disappeared altogether?

[Berdennikov] I would say that it has diminished considerably, because the START II agreement signed with the United States has made a huge contribution toward eliminating the threat of a first strike, but I cannot say that it has disappeared, because as long as there are nuclear weapons the danger of a holocaust will exist.

[San Sebastian] What will the next step be?

[Berdennikov] The next step is to put these agreements into practice. Then there is also, of course, a serious problem of nuclear proliferation and our top priority must be to extend the Nuclear Nonproliferation Treaty's period of validity indefinitely if possible.

[San Sebastian] Is this proliferation problem due exclusively to the breakup of the former Soviet Union's arsenal between various independent republics, or are there other countries?

[Berdennikov] Unfortunately there are many other nuclear or quasi-nuclear nations: India, Pakistan, Israel, Iran, South Africa....

[San Sebastian] What about Iraq?

[Berdennikov] It certainly achieved an alarming degree of nuclear development, which seems to have been neutralized.

[San Sebastian] Are there still any nuclear missiles in Russia aimed at Western cities?

[Berdennikov] Are there still any missiles in the West aimed at Russian cities? The answer is yes. If we take the mutual assured destruction (MAD) theory which has been operative till now, then it is a good thing, from a deterrent viewpoint, that missiles should be aimed at cities, although the first strike is never directed against them but against arms depots.

[San Sebastian] I deduce from your answer that, despite the change of atmosphere in Russian-U.S. relations, the disarmament talks are not exactly governed by mutual trust....

[Berdennikov] Of course. There are things we do not know and which cannot be verified, and we have not yet gotten as far as accepting our opponent's word.... Building trust is something which takes time. We proposed to the Americans to remove the programs from all the missiles, so that they would not be aimed at any target, but we received no reply.

[San Sebastian] Is the interpretation that the START II Treaty favors the United States in terms of both quantity and quality correct?

[Berdennikov] That was also the interpretation given by certain reactionary circles in Russia and it is absolutely incorrect. The treaty is very balanced and does not give

anybody an advantage; it provides for a common ceiling both for the total number of missile warheads and for the number of submarine-launched warheads.

[San Sebastian] Does START II mean that other nuclear powers such as Britain or China will gain more importance and influence by keeping their arsenals intact while the United States and Russia reduce theirs?

[Berdennikov] START II means that at some point, in the not too distant future, those countries will have to join the disarmament process, because the differences between the nuclear powers are no longer as deep as they were. Henceforth nobody will be able to make much further progress without bringing all the players into the game.

[San Sebastian] How much pressure has Washington put on Moscow, making the granting of economic and financial aid conditional upon the signing of this and other disarmament agreements?

[Berdennikov] During negotiations, this issue never arose and the price of cuts was never discussed. Disarmament is something which interests us as much as the Americans, and we never talked about selling arms; what we did discuss was the possibility of the West offering us help in destroying our arsenals.

[San Sebastian] Will Russia be able to meet the cost involved in this process, in spite of its crisis?

[Berdennikov] Currently we have to invest some 20 billion rubles a year to maintain our nuclear arsenal, and after the treaty that cost will decrease by about 25 percent, which shows that it can be done, although it will not be easy.

[San Sebastian] What will happen to the gigantic Soviet military industry?

[Berdennikov] We are facing a very urgent and complex conversion program, since state demand for weapons has dropped dramatically.

[San Sebastian] President Yeltsin has often complained about the resistance of the old regime's bureaucracy, which is boycotting his economic reforms. Does the same problem exist in the military sphere?

[Berdennikov] We have never had such good relations with the military as we have now. A spectacular change has taken place in this group's attitude, and the main engineer of this change has been Defense Minister General Grachev.

[San Sebastian] Have they accepted a drastic reduction in their sphere of power and influence?

[Berdennikov] Absolutely. They have also played a fundamental role in the disarmament negotiations. They understood that it was irrational for our country to maintain such a nuclear force—totally unnecessary if you think that a man can only die once and that it is

consequently absurd to build up the ability to kill him 10 times—and they also began to see that such a disproportionate arsenal undermines their own prestige and credibility. They accepted and backed the need to make room for a more rational defense policy of nonconfrontation with the West and of cutting arsenals—not just nuclear but also conventional—as well as limiting human resources to a maximum of 1.5 million men.

[San Sebastian] Does the risk of a coup d'état still exist?

[Berdennikov] I do not see any such risk. Of course there is strong opposition from communist and nationalist groups, but they do not have the ability to organize a coup.

[San Sebastian] If Yeltsin finally loses his battle against these forces, will any Russian Government fulfill the terms of the START II Treaty?

[Berdennikov] I do not know. If the treaty is ratified by parliament, it will be a commitment made by the Russian nation, not by its government, but you never know what may happen in a situation of that sort.

[San Sebastian] Will the treaty be ratified in parliament?

[Berdennikov] We are doing what we can, although I will not conceal from you the fact that there is strong opposition based on precisely the interpretation which you mentioned previously. Only a few days ago the self-proclaimed National Salvation Front—an amalgamation of communists and nationalists—officially made known its position against ratifying the treaty, alleging that it is a gift to the Americans.

[San Sebastian] What would the consequences be if this treaty were not to be ratified?

[Berdennikov] It would be a catastrophe for Russia. It would lead to an uncontrolled escalation of weapons which we cannot afford; to the relaunching of programs like the strategic defense initiative, or "star wars," which we cannot afford. The Soviet Union fell precisely because it could not afford "star wars" and the arms race against the West.

[San Sebastian] Can Russia guarantee that other nuclear republics, such as Ukraine which has not ratified START I, or Kazakhstan, will follow the path marked out by START II?

[Berdennikov] We have concluded the Lisbon Protocol in which they all undertake to become nonnuclear states as soon as possible and to sign the Nuclear Nonproliferation Treaty. We are now explaining to the governments of these republics that it is in their interest to fulfill the international agreements they have signed, otherwise the problem will not be Russia's but the whole world's.

[San Sebastian] Is there any risk of nuclear confrontation between neighboring former Soviet republics?

[Berdennikov] The risk is practically zero, not only because we get on together a lot better than that, but also because only Russia can be a nuclear power and possesses the necessary nuclear industry. If Ukraine were to decide to go nuclear, it would have to start from scratch.

[San Sebastian] It could always use the weapons it has in its territory...

[Berdennikov] Nuclear weapons do not last for ever; their longest life span is 10 years. Also, the weapons' command and control system is the same as that in the former Soviet Union; in other words, it is totally centralized in Moscow. Only Moscow can press the "nuclear button."

[San Sebastian] So does Moscow have total and absolute control over not only the strategic but also the tactical nuclear arsenal of the former Soviet Union? Is there any danger, however remote, of "leaks" or "losses" of nuclear weapons of any kind?

[Berdennikov] The answers are yes and no respectively.

Primakov Aide on Problem of Nuclear Scientists

LD0803165593 Moscow Ostankino Television First Channel Network in Russian 2220 GMT 6 Mar 93

[Studio interview with Tatyana Viktorovna Samolis, press secretary to the director of the Russian Foreign Intelligence Service, by anchorman Vladimir Sidorov; date not given; live or recorded—from the "100 Degrees Celsius" program]

[Text] [Sidorov] We have Tatyana Viktorovna Samolis, press secretary to the director of the Russian Foreign Intelligence Service, in the studio to comment on the problem of the brain drain.

[Samolis] Those scientists in whom you are evidently interested and in whom the public in general is now interested, are engaged in chemistry, biology and nuclear power engineering. There are approximately 100,000 such people working in Russia. But there are 1,500 to 2,000 scientists working in the munitions sector. That is where we begin to get the objects of desire of those countries with bad climates, which you are evidently concerned about as being possible places of work. But, fortunately or unfortunately, as the case may be, there are only a few dozen scientists who not only work in the munitions sector but who know everything, right down to the details.

It goes without saying that in this difficult situation that exists in Russia, that there is an emergence—I am able to tell you that there are already firms and certain specialists in Russia who are trying, who are making certain movements around these people. Regarding these few dozen people, I am able to tell you that, as a rule, they live in closed towns and we are not talking about them leaving. Though, of course, it is they who are the main objects of desire, it is they who are wanted. But once

again I have to say that it is not just minds that are wanted; hands may also be wanted, namely engineers and technicians, and these are included in the category of 100,000 about which you asked.

[Sidorov] Is there any reason for us to fear our own scientists helping to create a nuclear bomb that might later fall on our own heads?

[Samolis] Despite the fact that the area around this topic—as we have already said—is highly infected with misinformation, all the same, we cannot, of course, fail to attach importance to this or to understand the extent of the danger. Theoretically, of course, such a thing could occur.

[Sidorov] In other words, you cannot say openly: Yes, I know that such and such a scientist has gone somewhere and is helping to make a small nuclear bomb. Does your service permit you to say such things? Or is our conversation just

[Samolis, interrupting] You know, if our service were to know that a scientist of ours, specifically a scientist who represents a danger—and fortunately, there are few such scientists—if we were to know that he was leaving for another country, then of course, every effort would be made to neutralize this danger.

[Sidorov] Up to and including murder?

[Samolis] No, that is ruled out.

[Sidorov] Were any nuclear scientists physically eliminated prior to 1985?

[Samolis] I don't think so.

[Sidorov] You don't think so or you don't know?

[Samolis] I don't think so.

[Sidorov] All in all, Primakov was not mistaken when he invited you to take up the post of press secretary. To be quite honest, you have told me nothing specific during our whole interview. I value this, it is professionalism. In actual fact this is top professionalism. Thank you very much.

Reportage on Dual-Use Technology Control List

Yeltsin Directive Affirms List

93WP0106B Moscow ROSSIYSKIYE VESTI
in Russian 3 Mar 93 p 3

[“Directive of the President of the Russian Federation of 28 December 1992, No. 827”]

[Text] 1. To approve the list of dual-use equipment and materials and the corresponding technology applied for nuclear purposes being exported under licenses (appended).

2. The Government of the Russian Federation is to approve the statute on the procedure for control of dual-use equipment and materials exported from the

Russian Federation and the corresponding technology applied for nuclear purposes.

[Signed] President of the Russian Federation B. Yeltsin

Council of Ministers Decree

93WP0106A Moscow ROSSIYSKIYE VESTI
in Russian 3 Mar 93 p 3

[“Decree of the Council of Ministers of the Government of the Russian Federation”]

[Text] In keeping with the directive of the president of the Russian Federation of 28 December 1992, No. 327-rp, “On Introduction of Control of Exports From the Russian Federation of Dual-Use Equipment and Materials and the Corresponding Technology Applied for Nuclear Purposes,” the Council of Ministers and Government of the Russian Federation decrees:

1. To approve the appended statute on the procedure for control of dual-use equipment and materials exported from the Russian Federation and the corresponding technology applied for nuclear purposes.

2. The Commission for Export Control of the Russian Federation under the Government of the Russian Federation, in conjunction with the Ministry of Foreign Economic Relations of the Russian Federation and the State Customs Committee of the Russian Federation, is to provide for organization of control of dual-use equipment and materials exported from the Russian Federation and the corresponding technology applied for nuclear purposes.

[Signed] Chairman of the Council of Ministers-Government of the Russian Federation V. Chernomyrdin

Dual-Use Technology Control List

93WP0106C Moscow ROSSIYSKIYE VESTI
in Russian 3 Mar 93 pp 3-5

[“List of Dual-Use Equipment and Materials and Corresponding Technology Applied for Nuclear Purposes Which Are Exported Under Licenses, Approved by a Directive of the President of the Russian Federation of 28 December 1992, No. 827-rp: ‘On Introduction of Control of Exports from the Russian Federation of Dual-Use Equipment and Materials and the Corresponding Technology Applied for Nuclear Purposes’”]

[Text]

Control List

No. of Position	Name	Code of Commodity Nomenclature for Foreign Economic Activity
Section 1. Industrial Equipment		
1.1.	Spinning-stretching machine with numerical program control or equipped with computer with simultaneous control of two or more axes of coordinates	846390100; 846390900
<i>Technical note</i>		
	Machine tools based on the use of combined principles of spinning are included with spinning-stretching machine tools	
1.1.1.	precision rotary-spinning bars for cylindrical forms with internal diameters of from 75 to 400 mm.	846610100
1.1.2.	special software for machine tools indicated in point 1.1.	
1.2.	Blocks for numerical program control, especially developed blocks for movement control for application of numerical control of machine tools, machine tools with numerical program control, software, and technology. (A detailed description is given in Section 9 of the present List.)	
1.3.	Systems and devices for size control and software especially developed for them	903180; 8537
1.3.1.	size-control devices controlled by a computer or block for numerical program control block with the following specifications:	
	(a) two or more control axes; and	
	(b) error of measurement of length equal to or less than $(1.25 + L/1000)$ micrometers, checked with an instrument with a precision of measurement of less than 0.2 micrometers (L = measured length in mm.)	903140000
1.3.2.	linear measurement instruments with one of the following specifications:	
	(a) measurement systems of the noncontact type with precision equal to or less than 0.2 micrometers with a range of measurement of up to 0.2 mm.	
	(b) linear variational-differential systems with linearity equal to or less than 0.1% in a range of measurements of up to 5 mm.; and deviation equal to or less than 0.1% per day with an initial temperature in the premises of $+(-) 1$ K; or	
	(c) measurement systems including lasers and ones that maintain for at least 12 hours, with standard temperature $+(-) 1$ K and pressure, precision of measurement of $+(-)$ micrometers and higher, and an error of measurement equal to or less than $(0.2 + L/2,000)$ micrometers (L = measured length in mm)	
	<i>Note.</i>	
	Measurement interferometric systems without feedback which have lasers for measuring errors in moving parts of machine tools, means for checking the sizes and similar equipment are not subject to export control	
1.3.3.	angle measurement instruments with precision of measurement equal to or less than 0.00025°	9031
	<i>Note.</i>	
	Not subject to export control specified in point 1.3.3. are automatic collimators which use collimated light for determining the angular displacement of a mirror	
1.3.4.	systems for one-time checking of linear and angular parameters of hemispheres, with the following specifications:	903140000
	(a) error of measurement along any linear axis equal to or less than 3.5 micrometers per 5 mm; and	
	(b) error of angular measurement of no more than 0.02°	
	<i>Note.</i>	
	Especially developed software for systems indicated in point 1.3.4. includes software for simultaneous measurement of the thickness of the shell and the contour of the wall	
	<i>Technical notes.</i>	
	(1) Machine tools that can be used as a means of measurement are subject to export control if their parameters correspond to or surpass the specifications established for machine tools or measurement instruments	
	(2) Systems described in Point 1.3. are subject to export control if they in any way surpass the models that are subject to export control	

Control List (Continued)

No. of Position	Name	Code of Commodity Nomenclature for Foreign Economic Activity
Section 1. Industrial Equipment		
	(3) An instrument used for checking on the precision of the readings of a system for measuring sizes must meet the requirement given in international standard VDI/VDE 2617, Part 2.3.4.	
	(4) All permissible deviations of the measured parameters in this point are given for the modulus	
1.4.	Vacuum induction furnaces or induction furnaces with a controlled environment (inert gas) especially designed for operation with a working temperature of more than 800° C. or high-powered installations especially developed for induction furnaces with a reserve power of more than five kilowatts	851420100
	<i>Note.</i>	
	In keeping with point 1.4., furnaces designed for the technological process of applying semiconductor coatings are not checked	
1.5.	Isostatic presses capable of reaching a maximum working pressure of 69 megapascals and more, with an interior size of the working chamber of more than 152 mm and especially developed punches and matrices, and also a control system and especially developed software	846299500
1.6.	Robots, devices, and instruments with the following specifications:	
1.6.1	especially developed in keeping with national safety standards for work in an explosive environment (for example, restrictions on the parameters of electrical equipment intended for operation in an explosive environment); or	847989500
1.6.2.	especially developed and evaluated as the most radiation resistant (more than 5×10^6 rads (Si), which operate with the normal industrial level of radiation	847989500
1.6.3.	especially developed control program software for robots indicated in point 1.6.	
	<i>Definitions:</i>	
	(1) "Robot" - manipulator which moves continuously or with intervals, can use sensory pickups, and has the following specifications:	
	(a) is a multifunctional device	
	(b) can install or orient materials, parts, instruments, and special devices with movements in three-dimensional space	
	(c) includes three or more closed or open servodevices which may include walking engines	
	(d) may be programmed as the user is able with the help of a training method based on comparison of the model printout and the printout produced by the trainee or with the help of an electronic programming computer	
	<i>Note.</i>	
	The robot category does not include the following devices:	
	(a) manipulators controlled both by hand and with a telemonitor	
	(b) manipulators with a fixed sequence which are automatically moving devices operating in keeping with mechanically fixed program movements. The program is restricted by immobile hold elements such as pins and cams. The sequence of movements, the selection of directions, and the angles are either constant or else they are changed by mechanical, electronic, or electrical means.	
	(c) mechanically controlled manipulators with variable running which are automatically moving devices operating in keeping with mechanically fixed program movements. The program is mechanically limited by fixed but regulated hold elements such as pins or cams. The sequence of movements and the selection of directions and angles change within the framework of the given program model. Variations or modifications of the program model (for example, replacement of pins or cams) along one or several axes of movement are completed only with the help of mechanical operations.	
	(d) nonservocontrolled manipulators with variable running which are automatically moving devices operating in keeping with mechanically fixed program movements. The program may change, but the sequence is resumed only with the help of a binary signal with mechanically reinforced electrical binary devices or regulated limiters	
	(e) lifting cranes installed in warehouse bunkers and designed to provide for stacking and loading the content of these bunkers	

Control List (Continued)

No. of Position	Name	Code of Commodity Nomenclature for Foreign Economic Activity
Section 1. Industrial Equipment		
	(2) "Final devices"—include clamps, active means of mechanical processing, and any other instruments installed on the actuating mechanism of the manipulator	
	(3) Not subject to checking are robots used in nonnuclear production such as, for example, in painting chambers for motor vehicles	
1.7.	Equipment for vibration testing using computer equipment, with feedback, and testing equipment with a closed contour and also software for it capable of creating a vibration with an acceleration of 10 gravities and more, with a frequency of 20-2,000 hertz, and a force of 50 kilohertz and more	903120000
1.8.	Vacuum furnaces for smelting and casting, and furnaces with controlled atmosphere, including computer and monitoring control systems	841710000
1.8.1.	electric arc smelting furnaces which use electrodes with volumes of from 100 to 20,000 cubic centimeters, which provide for the process at temperatures greater than 1,700° C	841710000
1.8.2.	smelting furnaces with electron bundles and atomic plasma with capacities of more than 50 kilowatts, which provide for the process at temperatures greater than 1,200° C	841710000
1.8.3.	special software for furnaces indicated in points 1.8, 1.8.1, and 1.8.2.	
Section 2. Materials		
2.1.	Aluminum alloys with an ultimate tensile strength of 460 megapascals (0.46×10^9 N/m ²) and more with a temperature of 293 K (20° C) in the form of pipes and pistons with an exterior diameter of more than 75 mm.	760820300; 760820910; 760820990
	<i>Technical note.</i>	
	Data in this point are used for checking aluminum alloys both with the indicated ultimate strength after thermal processing and those which can reach this amount with thermal processing	282590200; 282619000; 282739000; 283329900; 283429100; 283699190; 285000900; 291529000; 293990900; 811211000; 811219000
2.2.	beryllium in the following forms: metal, alloys, and compounds containing more than 50% beryllium by weight and items made from them. Export control extends also to wastes and scrap metal containing beryllium in the above-described form	
	<i>Note.</i> The following are not subject to export control: (a) mesh windows for x-ray equipment, (b) profiles made of beryllium oxide in prepared form or semimanufactured products especially developed for electronic components or as bases for electronic circuits	
2.3.	Highly pure (99.99%) bismuth with a silver content of less than 10 parts per million of bismuth	810600100
2.4.	Boron and its compounds, mixtures, and materials saturated with it, in which the isotope boron-10 makes up more than 20% of the boron content by weight	280450; 281119000; 281210900; 281290000; 284200000; 284890000; 284990100; 285000300; 285100900
2.5.	Calcium (highly pure), containing simultaneously per million parts of calcium less than 10 parts of boron and less than 1,000 parts of other metals except magnesium	280521
2.6.	Chlorine trifluoride (ClF ₃)	282619
2.7.	Crucibles made of materials resistant to the effects of liquid actinoids, including:	
2.7.1.	crucibles made of materials with a purity of 98% and more, with a volume from 150 milliliters to 8 liters, manufactured from the following materials or lined with them:	6903
	(a) calcium fluoride (CaF ₂)	
	(b) calcium zirconate (metazirconate) (Ca ₂ Zr ₃)	
	(c) cerium sulfide (Ce ₂ S ₃)	
	(d) erbium oxide (Er ₂ O ₃)	
	(e) hafnium oxide (HfO ₂)	
	(f) magnesium oxide (MgO)	
	(g) nitride alloy of niobium, titanium, and tungsten (approximately 50% Nb, 30% Ti, and 20% W)	
	(h) yttrium oxide (Yb ₂ O ₃)	
	(i) zirconium oxide (ZrO ₂)	

Control List (Continued)

No. of Position	Name	Code of Commodity Nomenclature for Foreign Economic Activity
Section 1. Industrial Equipment		
2.7.2	crucibles with volumes of from 50 milliliters to 2 liters, manufactured from or lined with tantalum with a purity of 99.9% and higher	810390000
2.7.3.	crucibles with volumes of from 50 milliliters to two liters manufactured from or lined with tantalum with a purity of 98% or higher, coated with tantalum carbide, nitride, or boride (or any combination of them)	810390000
2.8.	Carbon and aramide fiber and threadlike reinforced materials with proportional modulus equal to 12.7×10^6 meters and more and specific tensile strength of 23.5×10^4 and more	
2.8.1.	glass fiber and threadlike materials with proportional modulus of 3.18×10^6 and more, and specific tensile strength of from 7.62×10^4 meters and more	701910100
2.8.2.	pipes made of composition materials with interior diameter of from 75 to 400 millimeters made of fiber and threadlike materials controlled in keeping with point 2.8.	681510000
	<i>Technical notes:</i>	
	(1) The term "fibrous and threadlike materials" includes continuous monofibrous threads and continuous yarn (braids and belts)	
	(2) The "proportional modulus" is Young's modulus in N/m^2 divided by the proportion in N/m^3 measured at a temperature of $23 +(-) 2^\circ C$ and relative humidity of $50 +(-) 5\%$	
	(3) The "proportional tensile strength" is the ultimate tensile strength at N/m^2 divided by the proportion of N/m^3 measured at a temperature of the environment of $20 +(-) 2^\circ C$ and relative humidity of $50 +(-) 5\%$	
2.9.	Hafnium in the following forms: metal, alloys, and compounds containing more than 60% hafnium by weight and items made of them	282590900; 282739000; 282749900; 283329900; 283429900; 285000300; 811291100; 811299100
2.10.	Lithium (enriched with the isotope lithium-5) in the following forms:	
2.10.1	hydrides of metals or alloys containing lithium enriched with the isotope lithium-6 in concentrations greater than those existing in nature (7.5% lithium-6)	284590900; 285000100
2.10.2	any other compounds containing lithium enriched with the isotope lithium-6 (including compounds, mixtures, and concentrates), with the exception of lithium-6 included in thermoluminescent dosimeters	284590900; 285100900
2.11	Magnesium (highly pure) containing at one time less than one-fifth% (0.0002) by weight of metal impurities, with the exception of calcium, and less than 10 parts boron per million parts magnesium	810411000
2.12	Maraging steel with a ultimate tensile strength of no less than 2.050×10^9 at 293 K ($20^\circ C$), with the exception of items less than 75 mm long	7218-7229
	<i>Technical note</i>	
	This point applies to both maraging steel with the indicated ultimate strength after thermal processing and that for which this figure can be reached through thermal processing	
2.13.	Radium-226, except radium contained in medical instruments	244440000
2.14.	Titanium alloys with ultimate tensile strength of no less than 900 megapascals ($0.9 \times 10^9 N/m^2$) at 293 K ($20^\circ C$) in the form of pipes or bars with an exterior diameter of more than 75 mm	810890700
	<i>Technical note.</i>	
	This point covers both titanium alloys with the indicated ultimate tensile strength after thermal processing and those in which this amount can be achieved through thermal processing	
2.15.	Parts made of tungsten, tungsten carbide, and alloys containing more than 90% tungsten weighing more than 20 kg and with the form of a cored symmetrical cylinder, including taking into account segments of the cylinder with an interior diameter of more than 100 mm but less than 300 mm, with the exception of parts especially designed for use as weights and screens for gamma-rays	810199000

Control List (Continued)

No. of Position	Name	Code of Commodity Nomenclature for Foreign Economic Activity
Section 1. Industrial Equipment		
2.16	Zirconium in the following forms: metals, alloys, and their compounds containing more than 50% zirconium by weight, in which the hafnium content does not exceed two percent, and items made from them	282560900; 282590900; 282619000; 282739000; 282749900; 282990100; 283329900; 283429900; 283529000; 283699190; 283990900; 284990900; 285000100; 285000300; 285000900; 290519100; 291529000; 291590000; 382320000; 8109
	Export control applies also to wastes and scrap metal containing zirconium in the form described above	
	<i>Note.</i>	
	Items made of zirconium in the form of foil or strips less than 0.10 mm are not subject to export control.	
Section 3. Equipment and components for isolating uranium isotopes		
3.1.	Electrolytic cells for producing fluorine with a productivity of 250 g of fluorine per hour	840120000
3.2.	Equipment for manufacture and assembly of rotors and also mandrels and shaping dies for bellows, namely	
3.2.1.	assembly equipment for assembling pipe sections of rotors for gas centrifuges, diaphragms, and covers	842191000
	<i>Note.</i>	
	This equipment includes precision mandrels, fixing arms, and devices for shrink fitting	
3.2.2.	adjustment equipment for installing pipe sections of rotors of gas centrifuges along the common axis	842191000
	This equipment, as a rule, consists of precision measurement gauges connected to a computer, which then controls the operation, for example, of pneumatic power cylinders used for leveling the pipe sections of the rotor	
3.2.3.	mandrels and dies for manufacturing corrugation bellows (bellows manufactured from highly durable aluminum alloys, maraging steel, and highly durable filament materials). The bellows have the following dimensions: (a) interior diameter—from 75 to 400 mm (b) length—12.7 mm and more; and (c) depth of corrugations—more than 2 mm	846610100
3.3.	Centrifugal multilayer balancing machines, stationary and mobile, horizontal and vertical, including:	
3.3.1.	centrifugal balancing machines for balancing flexible rotors with a length of 600 mm and, moreover, all the following specifications: (a) hinge or shaft with a diameter of 75 mm and more (b) the ability to balance a mass of from 0.9 to 23 kg (c) the ability to balance with a rotation speed of more than 5,000 revolutions per minute	903110000
3.3.2.	centrifugal balancing machines developed for balancing components of a cylindrical rotor and having the following specifications: (a) shaft with diameter of 75 mm and more (b) ability to balance mass from 0.9 to 23 kg (c) ability to balance to level of density with residual disbalance of 0.010 kg mm/kg and better; and (d) standard drive.	903110000

Control List (Continued)

No. of Position	Name	Code of Commodity Nomenclature for Foreign Economic Activity
Section 1. Industrial Equipment		
3.4.	Winding machines in which motions for placement, wrapping, and coiling fibers are coordinated and programmed for two and more axes, which are especially developed for the manufacture of composite and layered structures made of fibrous and filament materials with the possibility of winding cylindrical rotors with a diameter of from 75 to 400 mm and a length of no less than 600 mm; coordinating and programming control devices for them, and also especially developed software for them.	844590000
3.5.	Frequency transformers (also called inverters or converters) and other generators for them, with the following specifications:	8543
	(a) multiphase output with capacity of more than 40 watts	
	(b) develops capacity in frequency interval from 600 to 2,000 hertz	
	(c) overall nonlinear distortion less than 10%	
	(d) frequency regulation with precision better than 0.1%	
	<i>Note.</i>	
	Not subject to export control are frequency transformers especially developed or prepared for feeding starter engines (definition given below) and those with specifications indicated in subpoints (a) and (b) of point 3.5. along with a distortion of the overall harmonic of less than two percent and an efficiency factor of more than 80%	
	<i>Definition.</i>	
	"Starter engine"—especially developed or prepared circular hysteresis (or with magnetic resistance) high-speed, multiphase AC synchronization engine working in a vacuum, in a frequency transformer of 600-2,000 hertz with a capacity of 50-1,000 volt-amperes. In the multiphase transformer the winding is done on a core consisting of fine pressed plates with a thickness of 2.0 mm and less	
3.6.	Lasers, laser amplifiers and generators, including:	
3.6.1.	copper vapor lasers with average output power of 40 watts, operating on waves of 500-600 nanometers	901320000
3.6.2.	argon ion lasers with average output power of more than 40 watts operating on waves of 400-515 nanometers	901320000
3.6.3.	lasers based on neodymium ions (except glass), including:	
	(1) with wave length of 1,000-1,100 nanometers, with pulse excitation and Q-commutation, with pulse length of one nanosecond and more, with:	
	(a) the possibility of doubling the frequency and, after doubling it, having an average level of output power with the doubled frequency of more than 40 watts	
	(b) the possibility of multiplying the frequency and, after multiplying it, with an average level of output power with the multiplied frequency of more than 50 watts	
	(2) transforming waves of 1,000-1,100 nanometers and after transformation into waves 500-500 nanometers in length with an output power (with the new wave length) of more than 40 watts	
3.6.4.	restructured single-mode pulse lasers with dyes capable of producing an average output power of more than one watt, with a frequency of following pulses of more than 1 kHz, with a pulse length of less than 100 nanoseconds and wave length of 300-800 nanometers	901320000
3.6.5.	restructured pulse dye lasers with the exception of single-mode generators with average output power of more than 30 watts, pulse frequency of more than one kHz, a pulse length of less than 100 nanoseconds, and wave length of 300-800 nanometers	901320000
3.6.6.	alexandrite lasers with range width of no more than 0.005 nanometers, pulse frequency of more than 125 hertz, average output power of more than 30 watts, and wave length of 720-800 nanometers	901320000
3.6.7.	pulse lasers operating on carbon dioxide with pulse frequency of more than 250 hertz, average output power of more than 500 watts, and pulse length of less than 200 nanoseconds, operating on waves of 9,000-11,000 nanometers	901320000
	<i>Note.</i>	

Control List (Continued)

No. of Position	Name	Code of Commodity Nomenclature for Foreign Economic Activity
Section 1. Industrial Equipment		
	Point 3.6.7. does not cover more powerful (as a rule, 1-5 kilowatt) industrial lasers operating on CO ₂ which are used for cutting and welding, since these lasers are either operated continuously or with pulses with a frequency of less than 200 hertz	
3.6.8.	pulse excimer lasers (XeF, XeCl, KrF) with pulse frequency of more than 250 hertz and average output power of more than 500 watts operating on waves 240 and 360 nanometers in length	901320000
3.6.9.	Raman hydrogen vapor converters designed for operation with waves 16 micrometers in length and repetition frequency of more than 250 hertz	901320000
3.7.	Mass spectrometers that provide for measurement of the values of mass atomic numbers of 230 and more with resolution capacity better than two parts in 230 and ion sources such as:	
3.7.1.	magnetic or quadrupole mass spectrometers	902730
3.7.2.	mass spectrometers with flow discharge	902730
3.7.3.	thermo-ionic mass spectrometers	902730
3.7.4.	electron bombardment mass spectrometers with a chamber source constructed from materials resistant to uranium hexafluoride or coated with these materials	902730
3.7.5.	mass spectrometers with molecular beams such as:	902730
	(1) with chamber source constructed from nonrusting steel or molybdenum or coated with them and a cooling chamber that provides for cooling to 193 K (-80° C) and lower; or	
	(2) with chamber source constructed from materials or coated with materials resistant to uranium hexafluoride	
3.7.6.	mass spectrometers equipped with fluoride microsource developed for use with actinoids or actinoid fluorides	902730
	<i>Note.</i>	
	Not subject to export control are especially developed or prepared magnetic or quadrupole mass spectrometers that provide from removing uranium isotopes in the coatings of pipelines, products, and exhaust stream, and having all the following characteristics:	
	(a) resolving capacity—one part in more than 320	
	(b) ion sources designed with coating of Ni-Cr alloy, Monel metal, or nickel	
	(c) sources of ionization with electron bombardment	
	(d) with collector system suitable for isotope analysis	
3.8.	Instruments capable of measuring pressure up to 13 kilopascals with precision better than one percent, with corrosion-resistant elements that are sensitive to pressure, made of nickel, nickel alloys, phosphor bronze, nonrusting steel, aluminum, and aluminum alloys	902620
3.9.	Valves with a diameter of no less than 5 mm with bellows packing manufactured completely from aluminum, aluminum alloy, nickel, or an alloy containing no less than 60% nickel or coated with them, controlled both by hand and automatically	8481
3.10.	Superconducting electromagnetic solenoids with the following specifications:	850519
	(a) the ability to create magnetic fields of more than two tesla	
	(b) ratio between length and diameter L/D greater than two	
	(c) interior diameter more than 300 mm; and	
	(d) homogeneity of magnetic field better than 1% within the limits of 50% of the internal volume	
	<i>Note.</i>	
	Under point 3.10. not subject to export control are magnets especially developed or delivered as constituent parts of medical nuclear magnetic resonance (NMR) depiction systems	
	<i>Definition.</i>	

Control List (Continued)

No. of Position	Name	Code of Commodity Nomenclature for Foreign Economic Activity
Section 1. Industrial Equipment		
	A constituent part is not necessarily physically included in the set delivered. These parts may be delivered under the condition that it is completely clear how they fit into the delivery.	
3.11.	Vacuum pumps with entry diameter no less than 38 cm, with a pumping speed of 15,000 liters per second, and the ability to create an ultimate vacuum of less than 0.76×10^{-4} millibars	841410
	<i>Technical note.</i>	
	The ultimate vacuum is the steady-state value of the vacuum at the entry to the pump when it is closed	
3.12.	Heavy-duty rectifiers capable of operating for more than eight hours with a voltage of more than 100 volts and output current of more than 500 amperes, with stability of the current and voltage better than 0.1%	850422900
3.13.	High-voltage sources of direct current capable of producing while operating more than eight hours voltage of 20,000 volts and more, and current of no less than 1 ampere, with stability of current and voltage better than 0.1 percent	8501
3.14.	Electromagnetic isotope generators equipped with single-ion or multi-ion sources capable of providing an overall current of the beam of 50 milliamperes and more	840120000
	<i>Technical notes:</i>	
	(1) The requirement of point 3.14. pertains to separators that provide for enrichment with stable isotopes, including of uranium	
	The separator can isolate a lead isotope with a mass number of one and enrich uranium with isotopes a mass number of three	
	(2) The requirement of point 3.14. includes separators with an ion source controlled both by the magnetic field of the collector and by an external field	
	(3) Single-phase ion source with 50 milliamperes which can produce about 3 g of enriched uranium from natural.	
Section 4. Equipment involved in production of heavy water.		
4.1.	Specialized assemblies intended for separating heavy water from ordinary, made from phosphor bronze and copper (chemically processed in order to improve wettability) intended for use in vacuum distillation towers	841940000
4.2.	Pumps for feeding potassium amide solution into liquid ammonium. Pumps designed for pumping catalytic solutions from diluted or concentrated potassium amide in liquid ammonia ($\text{KNH}_2, \text{NH}_3$) with all of the following characteristics:	841381900
	(a) sealed (hermetically welded)	
	(b) for concentrated potassium amide solutions (more than one percent) with working pressure of 1.5-60 megapascals; and	
	(c) with power of more than 8.5 m^3 per hour.	
4.3.	columns with water-hydrogen sulfide trays made of high-quality carbon steel with diameter of 1.8 m and more, operating with a normal pressure of two megapascals and more, including columns especially developed or prepared for production of heavy water. Located inside the column are segmented trays with diameter of 1.8 m and more such as screen trays, subsidence trays, bubble cap trays, and spiral fittings developed for providing countercurrent contact and manufactured from materials such as nonrusting steel and mixtures of hydrogen sulphide and water that are resistant to corrosion	8419
4.4.	Hydrogen cryogenic distillation columns for the following purposes:	841940000
	(a) for operation with interior temperature from - 238 degrees C (35 K) and less	
	(b) for operation with interior pressure from 0.5 to 5 megapascals	
	(c) made of fine nonrusting steel (series 300) with low sulfur content or other equivalent cryogenic materials that are compatible with hydrogen, and	
	(d) with interior diameter of no less than 1 m and effective length of 5 m.	
4.5.	Ammonia synthesizing converters, ammonia synthesizing sections where the synthesizing gas (nitrogen or hydrogen) is collected from a high-pressure exchange column and is returned to the same column	8419

Control List (Continued)

No. of Position	Name	Code of Commodity Nomenclature for Foreign Economic Activity
Section 1. Industrial Equipment		
Section 5. Equipment for developing explosive systems		
5.1.	Pulse x-ray generators and pulse electronic accelerators:	902219000
	(a) with maximum electronic energy of accelerator of more than 500 kiloelectron-volts but no less than 25 megaelectron volts with quality (K) of no less than 0.25	
	(b) with maximum pulse energy of accelerator of no less than 25 megaelectron-volts and also a maximum power of more than 50 megawatts (maximum power is equal to the maximum voltage in volts multiplied by the maximum current of the beam in amperes).	
	<i>Note.</i>	
	Not subject to export control under point 5.1. are accelerators which are constituent parts of devices created for purposes other than electron radiation and x-ray radiation (for example, electronic microscopes) and those intended for medical purposes.	
	<i>Definition.</i>	
	The pulse length (in devices based on microwave accelerators), and the length of the beam pulse is an amount less than one microsecond or the length of beam pulse determined by the pulse length of the modulator.	
	Pulse current of beam (in devices based on microwave accelerators) is the average value of the current over the length of the resulting beam	
5.2.	Multiple-cascade gas and other high-speed systems (coil, electromagnetic, electrothermal, and other systems of the future) capable of accelerating items (charges) up to 2 km per second and more	8802; 8501; 9306
5.3.	Mechanical rotating mirror chambers. Mechanical frame chambers with reproduction speed of more than 225,000 frames per second. Tracking chambers with recording speed of more than 0.5 mm per microsecond, and also parts, including synchronizing electronic equipment especially developed for this purpose, and sets of rotor equipment (including turbines, mirrors, and bearings)	901020000
5.4.	Electronic frame and tracking chambers and tubes:	
5.4.1.	electronic tracking chambers with resolution capability in time of no more than 50 nanoseconds and tubes for them	854380
5.4.2.	electronic (or equipped with electrical shutters) frame chambers with exposure time of no more than 50 nanoseconds, including chambers with one frame	854380
5.4.3.	tracking and frame tubes used in chambers indicated in point 5.4.2., including:	
	(1) depiction amplifiers with photocathode located on a current-conducting coating to reduce the darkness resistance of the photocathode	
	(2) vidicon with silicon target where a high-speed system provides for the passage of photoelectrons before they reach the anode of the vidicon	
	(3) electro-optic shutters (Kerr or Pockels cells) and other pipes for such chambers, or	
	(4) other frame tubes and depiction devices with high-speed shutters of less than 50 nanoseconds, especially developed for chambers controlled under point 5.4.3..	
5.5.	Special instruments for hydrodynamic experiments such as:	
5.5.1.	interferometers for measuring speeds of more than one kilometer per second with time intervals of less than 10 microseconds	902750000
5.5.2.	manganin gauges for pressures of more than 100 kilobars, or	902620000
5.5.3.	quartz transformers for pressure of more than 100 kilobars	902620000
Section 6. Explosive substances and equipment associated with them		
6.1.	Detonators and multipoint incendiary systems (exploding jumper line, strike, and others	360300
6.1.6.	electrodetonators:	360300
	(1) spark	
	(2) current	
	(3) striking action, and	

Control List (Continued)

No. of Position	Name	Code of Commodity Nomenclature for Foreign Economic Activity
	Section 1. Industrial Equipment	
	(4) initiators with explosive foil	
6.1.2.	devices for initiating one or many electrodetonators located close together on the surface (more than 5,000 mm ² with one signal (with time differences throughout the entire area of less than 2.5 microseconds).	360300
	<i>Description.</i>	
	All the aforementioned detonators use a small electrical conductor (bridge, exploding wire, or foil) which disappears with the explosion when a powerful electrical pulse runs through it. In fuses of the nonpercussion type, the explosive firing wire initiates a chemical detonation in a sensitive explosive substance in contact with it, such, for example, as PETN (pentaerythrite). And in percussion detonation the evaporation of the firing wire leads to movement of the striker (bar), and their effect on the explosive substance produces the beginning of the chemical detonation. The striker in certain designs is accelerated by a magnetic field. The term "explosive foil" detonator may refer both to detonators with explosive firing wires and detonators of the percussion type. The term "initiator" is sometimes used instead of the term "detonator."	
	<i>Note.</i>	
	Detonators that use only the initial explosive such as lead azide are not objects under export control	
6.2.	Electronic components for launching (ignition) devices (switching devices and condensers for pulse discharge):	
6.2.1.	pipes with cold cathode (including gas dischargers and vacuum spark relays) regardless of whether or not they are filled with gas, acting as a spark interval containing three or more electrodes and having all of the following characteristics:	
	(a) peak voltage on anode no less than 2,500 volts	
	(b) peak anode current no less than 100 amperes	
	(c) delay time on anode no more than 10 microseconds	
6.2.2.	controlled spark dischargers with anode delay of no more than 15 microseconds and intended for peak currency of no less than 500 anodes	8540
6.2.3.	modules and assemblies of solid-state switches with all the following characteristics:	8541
	(a) peak voltage on anode no more than 2,000 volts	
	(b) peak anode current no less than 500 amperes	
	(c) initiation time no more than one microsecond	
6.2.4.	condensers with the following characteristics:	853210000
	(a) voltage of more than 1.4 kilovolts, energy reserve of more than 10 joules, volume of more than 0.5 microfarads, and sequential inductivity of less than 10 nanograms	
6.3.	Triggering devices and equivalent pulse generators with high power of current (for controlled detonators) of the following kinds:	
6.3.1.	triggering devices of explosive detonators developed for triggering parallel controlled detonators indicated in point 6.1.	8535
6.3.2.	modular electrical pulse generators intended for portable, mobile, and intensive use (including xenon drivers with flash bulbs), with all of the following characteristics:	8535
	(a) capable of discharging stored energy in less than 15 microseconds	
	(b) produces a current of more than 100 amperes	
	(c) with time of increase of pulse of less than 10 microseconds with a load resistance of less than 40 ohms	
	<i>Definition.</i>	
	The time of increase is determined as the time interval between 10 percent and 90 percent of the amplitude of current passing through the corresponding load	
	(d) set in a body which cannot be penetrated by dust	
	(e) size of no more than 25.4 cm	
	(f) weight of less than 25 kg, and	

Control List (Continued)

No. of Position	Name	Code of Commodity Nomenclature for Foreign Economic Activity
Section 1. Industrial Equipment		
	(g) adapted for use in temperature range of from -50 degrees C to +100 degrees C and in space	
6.4.	Powerful explosive substances and mixtures containing more than two percent of any of the following substances: cyclotetramethylenetrinitramine (octogen) cyclotrimethylenetrinitramine (hexogen) triaminotrinitrobenzene (TATB) any explosive substance with crystalline density of more than 1.8 g/cm ² with detonation speed of more than 8,000 meters per second, or hexanitrostilbene (HNS)	360200000
Section 7. Equipment and components for nuclear testing		
7.1.	Oscilloscopes and digital displays and components especially developed for them, including: joints, external amplifiers, preamplifiers, devices for removing the signal, and cathode-ray tubes for analog oscilloscopes	903020900; 903300000
7.1.1.	nonmodular analog oscilloscopes with a band of one henryhertz	903020900
7.1.2.	modular analog oscilloscopic systems with the following characteristics: (a) basic device with band of one henryhertz or more, or (b) built-in modules with an individual band of four henryhertz and more	903020900
7.1.3.	analog models of oscilloscopes for studying preperiodic processes with an effective band of more than four henryhertz	903020900
7.1.4.	high-speed oscilloscopes and digital displays using digital-analog transformers capable of remembering high-speed processes with single input signals and pulse sequence of less than one nanosecond (more than 1 million operations per second) with word length of eight bits and memory of more than 256 bits	
	<i>Definition.</i> A "band" is defined as the width of the frequency band within which the deviation on the cathode tube does not fall below 70.7 percent of the constant voltage fed to the amplifier of the oscilloscope	
7.2.	Photomultiplier tube with area of photocathode of more than 20 cm ² with time of pulse increase at anode of less than one nanosecond	903029000
7.3.	Superfast pulse generators with voltage at output of more than six volts with resistive load of less than 55 ohms and time for transmission of pulse of less than 500 ps (determined as time interval between 10 percent and 90 percent of the voltage amplitude)	854320000
Section 8. Miscellaneous		
8.1.	Neutron generator systems, including tubes designed for operation without external vacuum system and using electrostatic acceleration for inducing tritium-deuterium nuclear reaction	854310000
8.2.	Equipment associated with nuclear reactors and also work with nuclear materials such as:	
8.2.1.	telechiric devices which perform mechanical transmission of actions of the human operator by electric, hydraulic, and mechanical means to the operative manipulator, which is usually a gripping mechanism suitable for performing remote actions for operations of radiochemical separation and hot chambers. All manipulators must be capable of penetrating 0.6 meters and more through the cells of the wall and cover of the chamber	840140
8.2.2.	high-density (made of lead glass or other materials) radiation protection windows, including frames with a height of more than 0.3 meters, density of more than 3 g/cm ³ , thickness of no less than 100 mm, and specially developed frames	840120
8.2.3.	radiationally resistant to more than 5×10^5 rads (Si) television cameras and especially developed components (electronic parts and lenses) for them	852510900

Control List (Continued)

No. of Position	Name	Code of Commodity Nomenclature for Foreign Economic Activity
Section 1. Industrial Equipment		
8.3.	Tritium and tritium compounds and mixtures containing tritium in which its proportion of the overall number of hydrogen atoms reaches 1 per 1,000 except for products and devices containing no more than 40 curies in any chemical or physical form in one portion or device	284440000
8.4.	Equipment and plants for producing, restoring, isolating, concentrating, and handling tritium, and also equipment and materials suitable for use in them, including:	8401
8.4.1.	devices for cooling hydrogen and helium capable of cooling them to - 250 degrees C (23 K) and below, with the capacity to transfer heat of more than 150 watts; or	8418
8.4.2.	systems for storage, purification, and pumping of hydrogen isotopes that use metal hydrides as means of storage, pumping, or purification	8401
8.5.	Moisture-proof platinized catalysts especially developed and prepared for accelerating the exchange of hydrogen isotopes between hydrogen and water	711510000
8.6.	Helium in any isotopic form enriched with the isotope helium-3 in any form and in quantities of more than one gram, regardless of whether or not it is mixed with other materials, and also that contained in any equipment or device, excluding products containing less than one gram of helium-3	2844; 2845
8.7.	Alpha-radiating radionuclides and devices containing them, with a period of alpha-half-disintegration of no less than 10 days but less than 200 years, in the form of compositions or mixtures with an overall activity of more than one curie per one kilogram (37 GBk) and more, excluding devices containing less than 100 millicuries (3.7 GBk) of alpha-active substance	2844; 2845
Section 9. Addition to point 1.2. of Section 1 of the list		
9.1.	Numerical program control blocks especially developed blocks for control of movement for application of numerical control on machine tools, machine tools with numerical program control, software, and technology:	853710100; 853710990
9.1.1.	numerical program control blocks with four and more interpolation axes of coordinate from which there can be simultaneous movement along the contour	
9.1.2.	numerical program control blocks with two to four interpolation axes of coordinates from which there can be simultaneous movement along the contour or several of the following requirements:	
	(a) ability to process data under conditions of real time scale in order to change the path of an instrument during the time of the processing operation through automatic calculation and adjustment of data of the subprogram when processing on two or more axes with the help of measurement cycles	
	(b) the ability to directly (in dialog mode) obtain and process data from automated design systems (SAPR) for internal preparation of machine commands	
	(c) the ability, without changes in keeping with the technical specifications of the manufacturer to hook up auxiliary blocks that make it possible to increase the number of interpolation axes for control along the contour, even if this has not been specified by the additional requirements	
9.1.3.	block for control of movement, especially developed for machine tools and having one or several of the following characteristics:	8466
	(a) interpolation along more than four axes	
	(b) the ability to process on a real time scale as described in 9.1.2. (a); or	
	(c) the ability to receive and process SAPR data as described in 9.1.2. (b)	
	<i>Note 1.(med)</i>	
	Devices indicated in points 9.1.1., 9.1.2., and 9.1.3. are subject to export control if they:	
	(a) are adapted to be built in to machine tools that are not subject to export control and are included in them; or	
	(b) have been especially developed for machine tools that are subject to export control	
	<i>Note 2.</i>	
	Software (including documentation) for numerical program control blocks intended for export must be:	

Control List (Continued)

No. of Position	Name	Code of Commodity Nomenclature for Foreign Economic Activity
Section 1. Industrial Equipment		
	(a) only for operation on the machine tool; and	
	(b) limited to a minimum of operations necessary for use (installation, operation, servicing) of these devices	
9.1.4.	machine tools for processing by cutting metals, mineral ceramics, and composition materials, which can be equipped with electronic devices for simultaneous control along the contour with two or more axes	8459; 8460; 8461
	<i>Technical notes</i>	
	1. C-axis used for fastening grinding wheels in perpendicular position to processed surfaces are not regarded as the horizontal rotation axis	
	2. Not counted in the overall number of horizontal axes are secondary parallel horizontal axes, for example, the secondary rotation axis whose central line is parallel to the primary rotation axis	
	3. The nomenclature of axes should be coordinated with the international standard ISO 841 "Nomenclature of numerical program control for axes and kinds of movement in machine tools"	
	4. Axes of rotation do not necessarily specify a turn of more than 360°. The rotation may be done with a device for linear movement, for example, a screw or pinion strip	
9.1.5.	lathes, grinding machines, milling machines, and also any combinations of them which:	846011000
	(a) have two or more simultaneously controlled axes for processing along contour; and	
	(b) has one of the following features:	
	(1) two or more horizontal rotation axes	
	(2) one or more swinging spindles	
	<i>Note.</i>	
	Requirement 9.1.5. (b) (2) applies only to lathes	
	(3) axial displacement of one rotation of the shaft of less than 0.0006 mm	
	<i>Note.</i>	
	Requirement 9.1.5. (b) (3) applies only to grinding and milling machines with:	
	(4) "run-out" for one rotation of the shaft of less than 0.0006 mm	
	(5) precision of positioning with all compensatory possibilities less than:	
	(6) 0.001° on any rotation axis	
	(7) 0.004 mm along any linear axis (overall choice of positions) for grinding machines	
	(8) 0.006 mm along any linear axis (overall choice of positions) for milling machines and lathes	
	<i>Note.</i>	
	0.1.5 (b) (5) (8) does not include milling machines and lathes with precision of the positioning of one axis with all compensatory possibilities equal to or greater than 0.005 mm	
	<i>Notes.</i>	
	1. In keeping with Point 9.1.4. machine tools for outer, inner, and outer-inner polishing with all of the following characteristics are not subject to export control:	
	(a) centerless grinding machines	
	(b) machines for cylindrical grinding only	
	(c) maximum exterior diameter or length of part—150 mm	
	(d) coordinates change simultaneously only on two axes with control along the contour	
	(e) there is no horizontal c-axis	
	2. Point 9.1.4. does not cover special centerless grinding machines with the following characteristics:	

Control List (Continued)

No. of Position	Name	Code of Commodity Nomenclature for Foreign Economic Activity
Section 1. Industrial Equipment		
	(a) axes, restricted x, y, c, and a, where the c-axis is used to establish the perpendicularity of the grinding wheels to the processed surface, and the a-axis—for grinding cylindrical cams	
	(b) the displacement ("run-out") of spindle is no less (no better) than 0.0006 mm	
	3. Point 9.1.4. does not cover metal cutting or grinding machines with all of the following characteristics:	
	(a) delivered as a complex system with software especially developed for production of instruments or blades	
	(b) no more than two rotation axes which can be changed simultaneously when processing along the contour	
	(c) "run-out" for one rotation of the shaft of more than 0.0006 mm; and	
	(d) precision of positioning with all compensatory possibilities no less (not better) than:	
	(1) 0.004 mm along any axis for a full selection of position; or	
	(2) 0.001° for any rotation axis	
9.1.6.	machine tools for electric spark processing (MEO):	845630000
	(a) with no less than five variable coordinate axes for control along the contour with cable feed	
	(b) nonwired (MEO) machine tools with two or more horizontal rotation axes which can simultaneously be shifted during control along the contour	
9.1.7.	other machine tools for processing metals, ceramics, or composition materials with jets of water or other liquids, including abrasive additives, electron beam, or laser beam and with two or more rotation axes:	
	(a) in which coordinates change simultaneously when processing along contours; and	
	(b) have precision of positioning of less (better) than 0.003°	
9.1.8.	software especially developed or modified for development, production, or use of equipment controlled in keeping with points 9.1.1.-9.1.7.	
9.1.9.	special software providing adaptive control and having the following characteristics:	
	(a) for flexible production cells it consists at least of the equipment described in Point 9.1.3. (a) and 9.1.3. (b)	
	(b) capable of creating or changing during operation under real time conditions subprograms or parameters through the use of signals received simultaneously by at least two means of detection, namely:	
	(1) machine vision (optical range)	
	(2) depiction in infrared rays	
	(3) acoustic depiction (acoustic range)	
	(4) tactile measurement	
	(5) inertia positioning	
	(6) measurement of power	
	(7) measurement of rotating moment	
	<i>Note.</i>	
	Point 9.1.9. does not cover software providing only classification of functionally identical equipment within flexible production cells or that which uses the stored subprogram or a previously specified subprogram for distribution	
9.1.10.	software for electronic devices except those described in points 9.1.1.-9.1.3. makes possible numerical control of equipment controlled in keeping with point 9.1.	
9.1.11.	technology for development of equipment subject to export control in keeping with points 9.1.1.; 9.1.10; 9.1.14; 9.1.15	
9.1.12.	technology for production of equipment controlled in keeping with points 9.1.1.-9.1.7.; 9.1.14., 9.1.15.	

Control List (Continued)

No. of Position	Name	Code of Commodity Nomenclature for Foreign Economic Activity
Section 1. Industrial Equipment		
9.1.13.	other technology:	
	(a) for development of schedules of interaction as a constituent part of devices for numerical program control when preparing or changing subprograms	
	(b) for development of general software for inclusion in the numerical program control block of expert systems for future information models in production	
9.1.14.	the following components and parts of machine tools controlled in keeping with points 9.1.1.-9.1.7.:	
	(a) spindle units with radial and axial run-out of no more than 0.0006 mm	8466
	(b) linear positioning feedback devices (for example, devices of the inductive type, graduated scales, laser or infrared systems) with an overall precision with compensation better than $800 + (600 + L \times 10^3)$ nanometers, where L equals the effective length in millimeters, except for systems for measurement with interferometers without closed or open feedback containing a laser for measurement of errors of sliding movement in the machine tools, and determination of the sizes of the machine tools or subsidiary equipment	8466
	(c) feedback devices of the rotating type in position (for example, devices of the inductive type with graduated scales, laser and infrared systems) with precision during compensation of less (better) than 0.00025"; except systems for measurement with an interferometer without closed or open feedback loop, containing lasers for measurement of sliding movement in machine tools, devices for determining the sizes of machine tools, and similar equipment	8466
	(d) housing with guides and slides with the following characteristics:	8466
	(1) constant angle position of working organ of no more than two seconds of arc	
	(2) deviation from linearity in horizontal space of no more than two micrometers for a length of 300 mm; and	
	(3) deviation from linearity in vertical space of no more than two micrometers for a length of 300 mm	
	(d) diamond blades of inserts for cutting with all of the following characteristics:	820780000
	(1) ideal cutting edge preserved with 400 passes in any direction	
	(2) circularity (greatest distance along the normal between the real profile and the described circumference) of no more than two micrometers; and	
	(3) cutting radius between 0.1 and 5.0 meters, inclusive	
9.1.15.	especially developed components or subunits of the following kinds, which are subject to improvement in keeping with the requirements of the manufacturer: numerical program control, movement control panels, feedback machines or devices corresponding to the level specified in keeping with points 9.1.1.-9.1.4.; 9.1.4. (c) or surpassing it:	848630000
	(a) printed circuit boards with installed components and software;	8534
	(b) combined turn tables.	8466

Reportage of Plutonium Theft From Arzamas**More on Theft Investigation**

93WP0105A Moscow KOMMERSANT-DAILY
in Russian 23 Feb 93 p 14

[Olga Kiyenko report: "The Uranium From Udmurt Passed Through Poland"]

[Text] The investigation department of the Procuracy of Udmurtia yesterday passed to the republic court some of the materials from the investigation in the case of the theft of uranium from restricted enterprises in Glazovo city. The case was opened in December 1992 when criminals attempted to move 80 kilograms of uranium

through Poland. The procurator arrested 13 persons (of whom five are citizens of Belarus and one a citizen of Lithuania). KOMMERSANT has been reporting on the course of the case since mid-December.

Radik Nurdinov, the investigator for very important cases from the Udmurt Procuracy, reported to a KOMMERSANT correspondent that "the investigation is nearing completion and some of the materials have already been passed to the court." He declined to give the names of the defendants "since the main accomplices in the crime have not yet been found." Meanwhile charges have been brought against six persons under Article 266-2 ("unlawful acquisition and storage of toxic substances") and Article 172 ("negligence"). The latter

charge pertains to the managers of the Glazovo enterprises in respect of connivance with criminals during the extended time that they were perpetrating the theft. On the personal instructions of the procurator general of the Udmurt Republic the schedule for the preliminary investigation has again been extended, until 10 April. KOMMERSANT will be reporting on the results on 13 April.

Report of Theft Denied

LD1003102393 Moscow ITAR-TASS in English
0955 GMT 10 Mar 93

[By ITAR-TASS correspondent]

[Text] Moscow March 10 TASS—The newspaper "MOSKOVSKIY KOMSOMOLETS" published on February 20 a bloodcurdling report that a cargo of live weapons-grade plutonium, shipped from Arzamas, known as Russia's "atomic forge", was arrested in Belgorod a short while ago. It claimed that the load consisted of 11-lead containers packed with plutonium-210, used for charging nuclear warheads. This was denied by the newspaper "GORODSKOY KURIER", mouthpiece of the Council of People's Deputies of Arzamas-16, where the Russian Federal Nuclear Centre is known to be located.

"The report published by the Moscow newspaper," the "GORODSKOY KURIER" says, "has surely staggered the physicists of all the world by its stunning discovery that plutonium isotopes, hitherto unknown to science, are being produced by the Russian 'atomic forge'. We are compelled to disappoint them. The 'Avangard' plant is producing and delivering abroad polonium sources (with polonium-210 radioisotopes) for several decades now. They are mostly used in space technology and for heating various apparatuses".

"Naturally, all the deliveries," the "GORODSKOY KURIER" stresses, "are effected on perfectly legal grounds and there is no criminal background to them."

Further on Theft

PM0803161793 Moscow KOMSOMOLSKAYA
PRAVDA in Russian 5 Mar 93 p 1

[A. Fortunatov report: "Nuclear Physicists Wash on Pay Day"]

[Excerpts] Nizhniy Novgorod—From a report in the Arzamas-16 city newspaper GORODSKOY KURYER [City Courier]: "It costs 25 rubles to wash in the communal section of the most expensive and popular Central Bathhouse... The number of customers for the steam room depends on whether staffers at the all-union scientific research institute of experimental physics are receiving their wages on time."

Whether the person who stole 11 kg of uranium-238 frequented the Arzamas-16 Central Bathhouse is unlikely to be indicated in the investigation's papers. On the other hand, I am sure that for him, as an ordinary

inhabitant of the Federal Nuclear Center, the services of the bathhouses, laundries, and dry cleaners were not always affordable, even though they are reasonable by present standards. Wages here are paid extremely irregularly, and if it occurred to any of the local geniuses to store up the nervous tension gripping the city on pay day, the energy of hungry nuclear physicists could replace a nuclear power station.

The person who stole the uranium was neither a secret agent nor a maniac with a vague expression; he was simply a father with a family he could not feed. Having access to the strategic raw material, he little by little built up a store of it, and only after some time did he begin to think about where to get rid of it. He tried to find an outlet, and that was his undoing.

The files of Arzamas-16's investigating organs contain dozens of other "sensations"—from attempts to steal precious and rare-earth metals to food stocks which have disappeared from dachas. The number of crimes has risen 22 percent over the past year, and the question as to "why" sounds rhetorical here. In the first quarter of 1993, the number of staffers at the all-union scientific research institute of experimental physics will be cut by 1,000 people.

"The case of the theft of uranium is being greeted with understanding in the city today," Yu. Yakimov, Arzamas-16's deputy director in charge of operations, said to me. [passage omitted]

I talked with Academician Trutnev, deputy scientific director of the all-union scientific research institute of experimental physics.

"Recently, in the heat of debate, people have begun to forget that nuclear weapons are first and foremost a political weapon," he says. "The sheer fact that someone possesses them establishes a threshold which it is hard to cross in the event of any aggression. Does Russia need nuclear weapons?

"It inherited from the USSR the greater part of the infrastructure of the nuclear complex. The economic cost of maintaining it is relatively small compared to the military expenditure which the country would bear if a new defense system were created. Russia has a historical and moral right and should remain a nuclear power which can withstand any nuclear or nonnuclear aggression."

"What kind of nuclear weapons should Russia have?"

"Our forces should have completely different nuclear weapons. First, they should be low-capacity. Second, they should be air-detonated."

The uranium-238 incident is chicken feed. More terrible things are in fact happening. Now the people who used to build weapons, instead of switching to implementing tasks for the state as a whole, have been forced to fritter away their knowledge within commercial structures.

No Confirmation of Nuclear Test Resumption Plan

PM0403141993 Moscow KOMSOMOLSKAYA PRAVDA in Russian 4 Mar 93 p 3

[A. Golovanov report: "Rumors Surrounding Novaya Zemlya"]

[Text] As reported by Radio Warsaw, the latest issue of the German weekly STERN carries a report on a secret directive by Russian President Boris Yeltsin to the Russian Federation Ministry of Defense and Ministry of Atomic Energy. It talks about the start of preparations for the resumption of nuclear weapons tests on the Novaya Zemlya Archipelago. The magazine allegedly received a copy of the presidential document from its own sources. KOMSOMOLSKAYA PRAVDA's editorial office turned for explanations to those "circles" where the leak of information occurred.

"We have seen no such edict," Anatoliy Krasikov, leader of the president's press service, said. "We receive all documents from the head of state's personal office as soon as they are signed by him."

"Has this question been discussed in the president's entourage?"

"I heard about this story the day before yesterday (that is to say, 1 March—KOMSOMOLSKAYA PRAVDA correspondent's note), when I was telephoned and told that the magazine was carrying such an item."

The Russian president's administration knows nothing about any instruction or directive by Boris Yeltsin. However, 10 days ago our correspondent was refused entry to the Novaya Zemlya test range....

Defense Ministry Denies Development of Tectonic Weapons

LD1003190393 Moscow ITAR-TASS in English 1815 GMT 10 Mar 93

[By ITAR-TASS correspondent Roman Zadunaiskiy]

[Text] Moscow March 10 TASS—"No experiments on targeted nuclear explosions with the aim of creating tectonic weapons were conducted and are being conducted in the system of the Russian Defence Ministry," officials of the Russian Defence Ministry declared. The statement was made following recent mass media reports alleging that research was going on in the interests of the Russian Defence Ministry to create the so-called tectonic weapons and that experiments were made to imitate earthquakes in different regions of the world with the help of nuclear explosions.

Officials from the Russian Defence Ministry told ITAR-TASS that some media reports alleged that a seismic laboratory belonging to the Russian Defence Ministry and stationed in Eshery (Abkhazia) was one of the important centres for the development of tectonic weapons. Reports alleged that one of the reasons why Russian troops had not been withdrawn from Abkhazia

is that the laboratory is of particular importance and its dismantling would cause colossal damage.

The statement said that there are absolutely no grounds for linking the withdrawal of Russian troops to the importance of the seismic laboratory. The personnel of the laboratory was evacuated in October, 1992, while its equipment was practically destroyed as a result of military clashes between Abkhazian and Georgian armed formations. A laboratory's basement several metres deep and intended for the installation of seismic meters was the hardest hit, the statement said.

Similar laboratories existing in the Russian Defence Ministry make up a system of control over underground tests of nuclear weapons, the statement pointed out.

Interpol Bureau Chief on 'Red Mercury' Leaks

PM0803155593 Moscow ROSSIYSKIYE VESTI in Russian 6 Mar 93 p 8

[Viktor Alekseyev report: "Whither Is the 'Red Mercury' Leaking?"]

[Text] The scale of the plundering of the republic recently reached an unprecedented scale. In their desire to "skim off" hitherto unprecedented profits, underground business dealers and newly emerged speculators, not without support from high-ranking functionaries, are shipping abroad virtually everything that can be shipped. According to law enforcement organs' estimates, the shipment of strategic raw materials abroad poses a special danger.

The appetite of our country's business sharks is truly insatiable. The scent of foreign currency long ago dulled any sense of duty to and pride in our great-power state. More than 600 tonnes of nonferrous and rare-earth metals were embezzled from different enterprises in the metal processing industry in just a few months of last year alone. Some 45,000 tonnes of nonferrous metals were exported from Russia to Scandinavia via Estonia just between May and September 1992. The shadow economy's revenue last year was in the order of some 2.5 trillion rubles.

The West is literally choking on the influx of "inobtrusive" services offered by Russian businessmen, whose main principle is to steal and resell. Obsolete submarines, caterpillar tracks, pipes, and timber are one thing—but strategic raw material is something quite different. There is already serious talk abroad, questioning whether the Russians are helping certain countries to create [sozdavat] the atom bomb. A series of publications abroad have again carried reports about the superstrategic "red mercury" which is incessantly leaking from Russia to West European countries.

All these topical problems were the subject of discussion by specialists at Interpol's recently held first European conference on questions concerning the illegal transit of nuclear materials. Militia Lieutenant General Vasiliy

Ignatov, chief of Interpol's National Central Bureau in Russia, commented on the results of the conference:

"The conference was attended by representatives of virtually all European countries, as well as the United States and Canada. Speeches were delivered by nuclear specialists from Germany and by criminal police specialists from the developed countries. We also presented our report, which was honest and frank. This is a very complex question, since it poses enhanced danger to mankind. Whereas drugs bring evil to those who use them, nuclear materials pose a colossal danger to all around them. It is no secret that radioactive materials are still being embezzled in our country, but the emphasis must be correctly placed. There is not a single recorded instance—and this was confirmed by everyone—of embezzlement, loss, purchase, or sale of weapons-grade nuclear materials, in other words materials which could be used to make a nuclear bomb, like highly enriched uranium or plutonium. As a rule, we are talking about slightly enriched radioactive materials or ion-emitting materials, including the broad range of rare-earth metals which have been and still are widely used in different technologies and industrial sectors. It is, however, worth admitting honestly that there have been specific instances of rare-earth and radioactive materials being shipped abroad from Russia through nearby foreign countries, primarily the Baltic countries.

"Now as regards 'red mercury.' One of Germany's leading scientists said in his speech at the forum that, at the dawn of the emergence of nuclear weapons, scientists had agreed that nuclear materials would be referred to as 'red mercury.' Now these terms are being confused. No red mercury exists in nature, either factually or physically, and such an element is impossible to create.

"What is being sold, as a rule, are different reagents. There have been instances when any red materials have been described as 'red mercury.' But the problem exists nevertheless. This is why a meeting of specialists elaborated an entire system of measures for the notification and training of police forces and the population, and developed measures for urgent notification in the event that any nuclear materials are detected or a radiation danger develops.

"Let me emphasize once more that law enforcement organs will not have to follow radioactive traces abroad if we impose in our own country effective control over the storage and utilization of such materials, something that is unfortunately still lacking."

TURKMENISTAN

Objections to Iran AES Plan Reported

PM0803200993 Moscow *IZVESTIYA* in Russian
6 Mar 93 First Edition p 4

[Vladimir Kuleshov report followed by Sergey Leskov commentary under general heading: "Attempt Being Made To Oust Russian Nuclear Scientists from World Market"]

[Excerpt] Ashgabat—Scientists of the Turkmenistan Academy of Sciences have declared their official categorical "No!" to the future construction of the powerful Iranian nuclear electric power station which, according to preliminary information, will be located on the southeast shore of the Caspian, close to Turkmenia's state border.

According to foreign press reports, a secret agreement between Iran and Russia was concluded as long ago as 24 August last year. Although it has still not officially been made public, it provides both for a whole package of construction and installation work by Russia's "Zarubezhatomenergostroy" in constructing the station and for the two countries' cooperation in formulating radiological protection and nuclear safety measures, in producing and utilizing radioactive isotopes in industry and agriculture, and also in training specialists and carrying out research and development.

Under the terms of the accord, which is designed for a period of 15 years, two reactors will be constructed in Iran, each with a capacity of 440 megawatts. But David Kidd, spokesman for the International Atomic Energy Agency, maintains that the agreement between Iran and Russia does not contain any accords on the fate of the spent nuclear fuel, which could be used to produce nuclear munitions. "At first the Russians were very surprised, but then they said that they had not thought about this," Kidd said.

"Not so long ago I met with Professor Gordon, an eminent U.S. scientist," Agadzhanyan Babayev, president of the Turkmenistan Academy of Sciences, told me. "He urged us scientists and the republic's entire public to say 'No!' to construction of the future Iranian nuclear electric power station. The main reason for this stand, which we have already officially stated to our government, is the too high seismic activity in the region of the proposed construction site. In addition, there is its proximity to a sea which is shared by everyone here. If this were to come about, many people would have to pay the price...."

I went to the Turkmenistan Academy of Sciences Institute of Seismology.

"Two years ago, before the breakup of the USSR, we were involved in work on assessing the seismotectonic conditions of the region designated by the Iranian side to accommodate the station," Batyr Karriyev, head of the experimental seismology laboratory, told me. "This region is characterized by intensive tectonic movements and by vigorous mud-volcanic and seismic activity. Very strong earthquakes have originated there repeatedly with an intensity of up to force 9. In short, there is no way a nuclear power station should be built there. The situation is also exacerbated by the proximity of the Caspian: The water level has been rising steeply since 1978. In 1991, at the request of the USSR 'Zarubezhatomenergostroy,' we reached a preliminary conclusion on the region of this nuclear electric power station in Iran. The Islamic republic is also familiar with our document, but, to all appearances, neither 'Zarubezhatomenergostroy'

nor the Iranian governmental organization for nuclear power generation took it particularly into account."

During his fairly recent visit to Ashgabat Khadzhi Azim, vice president of the Iranian organization for the construction and operation of nuclear stations, persistantly tried to convince Turkmen scientists and journalists that the nuclear electric power station would do no one any harm. But the Iranian power engineers ought to have heeded the opinion of Turkmen scientists! Until recently there was no system of seismic observations on the territory of the Islamic republic equal to the importance of the planned project. [passage omitted]

UKRAINE

Russian Stance on Nuclear Weapons Condemned

*LD0703142493 Kiev Radio Ukraine World Service
in Ukrainian 0800 GMT 7 Mar 93*

[Text] The press center of the Ministry of Foreign Affairs of Ukraine has issued a statement by Yuriy Kostenko, minister of natural environmental protection, head of the delegation of Ukraine at the negotiations with the delegation of the Russian Federation. In particular, the statement reads as follows:

In spite of the fact that accord was reached at the level of the heads of delegations on restraint in elucidating the differences that arose in the course of the negotiations, the Ministry of Foreign Affairs of the Russian Federation issued a report on negotiations between the delegations of Ukraine and the Russian Federation on a wide range of issues in connection with the nuclear weapons deployed on the territory of Ukraine, on 5 March of this year.

The statement notes: In connection with the fact that this report interprets in a one-sided way, far from reality, both the contents and subject of the negotiations and the problematic issues to be settled at them, as well as the very course of the negotiations, I deem it necessary to state as follow:

1. A proposal to hold negotiations with the Russian Federation on issues of guaranteeing the nuclear and ecological safety of the strategic forces deployed on the territory of Ukraine was made by the Ukrainian side as early as at the beginning of last year.

The Russian side continuously evaded discussing specific facts of the issue of holding these negotiations.

A response to the latest appeal by the Ukrainian side in this connection was only received by us two months after the appeal had been made.

Meanwhile, Russian structures responsible for the nuclear and ecological safety of nuclear warheads knowingly did not perform periodic servicing, which was to guarantee their reliable and unproblematic operation.

The aim of this policy is absolutely clear, and it was openly declared at the latest round of negotiations in Moscow.

This is to compel the Ukraine to recognize the strategic nuclear forces on its territory as belonging to Russia, as well as to recognize Russia's right of ownership of the nuclear weapons in Ukraine, with all the negative consequences affecting Ukraine, including its economy.

2. The first and second rounds of negotiations demonstrated the readiness of the two sides' experts to reach agreement between themselves, in particular with respect to the search for specific mechanisms for using nuclear material, which is released after the destruction of nuclear weapons, acceptable to Ukraine and the Russian Federation.

Reaching accord is being hindered by the political position of the delegation of the Russian Federation on issues of the ownership of nuclear weapons' components, and of the status of the strategic nuclear forces deployed on the territory of Ukraine, being issues of principle.

3. The fundamental differences in Ukraine's and the Russian Federation's positions at the negotiations are as follows:

Ukraine, from considerations of principle, cannot agree to the presence of foreign forces on its territory, whereas this is exactly what the Russian Federation insists on.

As is known, under the Minsk agreement of 30 December 1991, the nuclear weapons deployed on the territory of Ukraine only operationally were put under the Unified Command of the Strategic Forces of the CIS, and any attempts by Russia to alter this situation are legally groundless.

The second fundamental difference is that the Russian side seeks to compel Ukraine as one of the legal successors of the former Soviet Union to relinquish its right of ownership of nuclear components of the weapons deployed on its territory.

Thus, this is a consistent policy by the Russian Federation, aimed at transferring the strategic forces on the territory of Ukraine to the jurisdiction of Russia and at appropriating Ukraine's stocks of materials and capital equipment, which have never been handed over to the Russian Federation.

4. An extremely serious issue at the negotiations is that of the right of ownership, and of the further use of nuclear material released from tactical warheads, removed from the territory of Ukraine to the Russian Federation in the spring of 1992 to be dismantled and destroyed.

Ukraine has never relinquished its right of ownership of this material, and insists on settling the issue of its use, together with the issue of the use of strategic warheads.

The Russian delegation ignores this just demand by the Ukrainian side, referring to instructions received from the former's political leadership, which naturally affected the atmosphere of the negotiations.

5. As early as after the first round of negotiations, a policy, by the Russian side, to use the mass media to achieve its real aim also became obvious to everybody.

It is not by chance that the article "Second Chernobyl Ripening at Ukraine's Missile Silos" appeared in the newspaper IZVESTIYA.

After the second round of negotiations, the Russian side issued the tendentious and one-sided statement by the Ministry of Foreign Affairs of the Russian Federation, mentioned above.

In fact, the assessment of the negotiations by Pavel Grachev, minister of defense of the Russian Federation, was negative, with their failure also forecast by him, as early as at the beginning of the second round of negotiations, at a news conference in Moscow.

The Ukrainian side cannot but regard this as pressure, with the purpose of being granted unilateral concessions by Ukraine.

6. Since June 1992, the Ukrainian side has been proposing to hold negotiations with the Russian side on concluding a memorandum on the division of limitations and restrictions imposed by the Strategic Nuclear Arms Treaty [as heard] on the former USSR's strategic offensive arms.

It was envisaged by Article Two of the Lisbon protocol that this accord be reached between Belarus, Kazakhstan, Russia, and Ukraine. The Ukrainian side was ready to hold relevant negotiations on a quadrilateral basis. Any other decision would show disrespect for the other sovereign states.

But the delegation of Russia firmly insisted that the discussion of the text of the memorandum proposed by it be held just on a bilateral basis, in spite of the fact that provision was made for the memorandum to be signed by four states.

7. The Ukrainian side is prepared to continue negotiations in a constructive spirit with the purpose of concluding relevant agreements as soon as possible.

These agreements must ensure the reliable maintenance and manufacturer's inspection [avtorskyy nahlyad] of strategic nuclear arms deployed both in Ukraine and in the Russian Federation; settle issues of the further use of all the components of strategic and tactical nuclear warheads; and ensure the normal functioning of the strategic nuclear forces deployed in Ukraine.

Cabinet Tightens Control Over Military Materiel Trade

LD1203125593 Kiev Ukrayinske Radio First Program Network in Russian 1000 GMT 12 Mar 93

[Text] The Cabinet of Ministers of Ukraine has passed a resolution envisaging measures to ensure proper control over the export and import of arms, military hardware, separate kinds of raw materials, materials, equipment, and technologies which can be used for the creation of weapons, and other military and special equipment, to ensure observance of the international obligations of Ukraine concerning nonproliferation of weapons of mass destruction and their delivery systems.

Regulations have been approved on a governmental export control commission and its composition. The commission is headed by Vasyl Yevtukhov, Ukraine's vice prime minister. It has the exclusive right to licence, allocate, sell, and purchase dual-purpose technologies, equipment and materials, arms and military hardware, spare parts, and military property. The resolution envisages the setting up of an export-technical committee at the Cabinet of Ministers of Ukraine, which will be entrusted with performing the functions of a working body for the preparation of documents within the competence of the governmental export control commission and check the fulfillment of the adopted decisions.

The government resolved that information on the export and import of arms, military hardware, separate types of raw materials, other materials, equipment, and technologies which can be used for the creation of weapons, military and special equipment, is secret.

Russian Contends Country Wants Nuclear Arms

OW1003145993 Moscow INTERFAX in English
1434 GMT 10 Mar 93

[Report by diplomatic correspondents Andrey Borodin, Dimitriy Voskoboinikov, Igor Porshnev; from the "Diplomatic Panorama" feature—following item transmitted via KYODO]

[Text] There is an impression that Ukraine is changing its attitude to nuclear weapons: it wants to possess them, a highranking Russian diplomat told INTERFAX. He qualified the charges of Yuriy Kostenko, chief Ukrainian negotiator at the talks with Russia, who accused Moscow of attempting to "appropriate Ukrainian material values," that is nuclear forces deployed on Ukrainian territory, as "absolutely ungrounded, tendentious and misconstrued." Ukraine, the diplomat explained, has not ratified a single "basic agreement" on strategic nuclear arms; it isn't bound by anything even formally. The diplomat also said that Ukraine "hasn't paid a kopeck to Marshal Shaposhnikov." In other words, it has not contributed funds to the upkeep of the joint CIS armed forces.

Kiev Dissatisfied With Course of N-Arms Negotiations

*OW0903170793 Moscow INTERFAX in English
1642 GMT 9 Mar 93*

[Following item transmitted via KYODO]

[Text] Moscow is trying to force Ukraine to transfer ownership of the strategic nuclear arms located on Ukrainian territory to Russia. So states an announcement issued Tuesday [9 March] by Yuriy Kostenko, the head of the Ukrainian delegation in Russian-Ukrainian negotiations on nuclear weapons.

He said that Russia's attempts to gain the right to ownership of nuclear weapons components located in Ukraine represents "an attempt to appropriate the

republic's material assets." The head of the Ukrainian delegation accused Moscow of violating the second article of the Lisbon Protocol. He feels that the Russian Federation is blocking Ukraine's proposal to conduct negotiations with Belarus and Kazakhstan "to sign a memorandum on dividing up the quotas and limitations established by the START I Treaty on strategic offense weapons of the former USSR."

The statement emphasizes, nevertheless, that Ukraine is prepared to continue negotiations with Russia "in a constructive spirit," in order to close a corresponding agreement, secure reliable technical maintenance and supervision of nuclear weapons, and solve the issue of the further use of all amassed strategic and tactical nuclear weapons as soon as possible.

GERMANY

Concern About DPRK Withdrawal From NPT

*LD1203123093 Berlin DDP in German 1116 GMT
12 Mar 93*

[Text] Bonn (DDP)—The federal government has expressed concern about the DPRK's announcement that it will withdraw from the nuclear nonproliferation treaty. Government spokesman Dieter Vogel told journalists in Bonn today the government considers this planned step a threat to stability and security in east Asia. The German Government is therefore appealing to the DPRK to reconsider the decision. Vogel stressed that Germany still supports an indefinite extension of the nuclear nonproliferation treaty.

Government Confirms, Defends Arms Deal With Taiwan

Taiwan Said To Receive Missiles

*LD1302112793 Hamburg DPA in German 1039 GMT
13 Feb 93*

[Excerpt] Bonn (DPA)—Taiwan is to receive Patriot and Ram antiaircraft missiles from the United States in which German firms are supplying important components. The federal government confirmed reports to this effect today. The government approved the delivery of parts within the framework of existing cooperation agreements. It sees no reason to refuse approval of the Untied States' intended export to Taiwan of the purely defensive antiaircraft weapons, which are exclusively for defense against air attacks. [passage omitted]

Arms Deal Reportedly Approved

*LD1302094593 Berlin DDP in German 0552 GMT
13 Feb 93*

[Text] Munich (DDP)—According to a report in the Munich-based magazine FOCUS, the federal government has approved a substantial arms deal with Taiwan. The federal Security Council decided on 28 January that the island state could receive Patriot and Ram (rolling airframe missile) air defense missiles, the magazine reports in its latest edition. Federal Chancellor Helmut Kohl ordered that approval of this deal be kept secret whatever happens so as not to put a strain on relations with the PRC, the magazine said.

According to the report, the arms are being manufactured in the United States using German supplies. The Ram missile is built jointly by the Germans and Americans, and involves the Dasa (Daimler-Benz group), Diehl, Bodenseewerk Geraetetechnik and Telefunken Systemtechnik companies. Dasa supplies propulsion and guidance technology to the United States for the Patriot missiles, which became famous in the Gulf war as "Scud

killers." The cooperation agreement between the American manufacturers and the German partners stipulates that Germany must approve any export outside the NATO area.

Companies Delivered Machines for Iraqi Nuclear Program

*AU0802143793 Hamburg DER SPIEGEL in German
8 Feb 93 p 16*

[Text] German companies are far more involved in the Iraqi nuclear program than is realized. According to a confidential study by the International Atomic Energy Agency (IAEA) in Vienna, almost one out of two machines in Saddam Husayn's nuclear bomb factories came from the FRG. The IAEA has drawn up a list, noting the origin of about 600 machines—according to this list, 243 were exported from the FRG to Baghdad. In addition, there were also deliveries by foreign subsidiaries of German companies. Germany is followed by Switzerland with 134 and Great Britain with 75 machines. According to the IAEA categorization, many German machines are so-called universal machines, which do not expressly have a military purpose. To distinguish among the deliveries according to their importance, the IAEA has worked out three categories. The top group of the most important equipment comprises 47 machines—22 were made in Germany.

TURKEY

Air Defense Deterrent to Potential Mideast Missile Threat

*NC0503095093 Ankara TURKISH DAILY NEWS
in English 26 Feb 93 pp 11-12*

[Report by Lale Sariibrahimoglu]

[Text] Ankara—Turkey says its rapidly growing strength in air defense is its deterrence to the potential missile threat on its door-step, where the arms race continues unabated.

Turkey's absence of a missile strategy has always been an important element in preventing the spread of ballistic or nuclear arms races in this part of the world, asserted military analysts. Otherwise it could have led to the spread of an arms race by a country such as Greece, said one analyst. As Turkey remains calm about the missile race taking place nearby, the latest report on arms buildup in the volatile Middle East focused on Iran's continued purchase of chemical weapons. Although the five permanent members of the U.N. Security Council are the main suppliers of arms to the Middle East, any acquisition of chemical or nuclear weapons and the capability of firing them by countries such as Iran would not go unchecked again by the main arms suppliers to the region, said the analysts.

The U.S.-led coalition forces stopped Iraq short of further developing its chemical and nuclear missiles said the analysts, adding that it now may be Iran's turn if Tehran goes too far.

Turkey's growing air defense capability coupled with a strong Army is regarded as the main deterrence to potential threats. Under the Turkish Army's ongoing restructuring plan, the Middle East is regarded as a region of potential risk since the demise of the Cold War. It has led to the deployment of more troops along the Eastern and the Southeastern borders. Additionally, a revised air defense master plan last year introduced a new concept to Turkey's air defense system. It consists mostly of a package of gradual measures to counter the current and future medium-range missiles belonging to Turkey's neighbors in the south and the southeast as well as nuclear warheads that they have declared they will develop. Within this framework several joint defense projects will be revised, while the supply of advanced

systems such as early warning planes and midair refueling aircraft is being considered.

According to a military analyst, for example, Iran knows that if it attacks Turkey, Ankara has the F-16s and a strong Army to retaliate. Additionally, countries like Iran would not be allowed by NATO to develop a successful nuclear program, or procure delivery systems capability, say Turkish military experts.

Other not so hopeful experts believe there are many "crazy people" who would use nuclear weapons without hesitation, for which Turkey must be prepared. They say that obtaining delivery systems is not that vital since a crude nuclear weapon can be loaded onto a ship or a truck and left at an enemy port or station and exploded. Meanwhile, the ongoing uncertainty about the control of nuclear weapons in some republics of the former Soviet Union is putting Turkey in a dangerous position, say the observers.

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